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Alaska Department of Environmental Conservation
RCRA Hazardous Waste Management Compliance Evaluation Inspection Report

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▷ **Facility Name:** MAPCO Petroleum Inc. - North Pole Refinery

Identification Number: RCRA Non-notifier (AKD000850701, as of March 12, 1987)

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NOW RELEASABLE

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MAR 20 1987

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Date of Inspection: March 5, 1987.

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Background and Compliance History:

MAPCO's North Pole Refinery was constructed in 1976 and 1977 by the Energy Company of Alaska (ECA), a subsidiary of Earth Resources Corporation of Alaska (ERCA). The refinery is located within the city of North Pole, on approximately 40 acres of land leased from the State of Alaska, within Section 16, Township 2 South, Range 2 East, Fairbanks Meridian. Refinery operations began in October 1977, as the North Pole Refining Division of ERCA. The refinery was acquired by MAPCO Petroleum, Inc. of Tulsa, Oklahoma in 1980.

At the time of this inspection, MAPCO had not notified EPA of RCRA hazardous waste activities at this facility. Since the inspection, the facility has notified EPA of hazardous waste generation activity, has been assigned EPA identification number AKD000850701 and has shipped hazardous waste off-site for treatment, storage, or disposal.

The facility has experienced many spills of various petroleum products since 1977. The primary sources of these spills have been leaks from the original sumps, constructed out of concrete, which had cracked; leaks from old, military surplus, product storage tanks of bolted construction, which were located inside a leaky containment structure; and spills in the rail tankcar loading area, where there were no spill containment structures. The Alaska Department of Environmental Conservation (DEC) estimates that a total of more than 150,000 gallons of petroleum have been released to the environment as a result of these spills. Groundwater contamination was detected beneath the refinery in 1982. The sumps were repaired, between 1982 and 1985, with the installation of steel liners. The old leaking tanks have been taken out of service and replaced. Containment structures around the tanks were repaired and were installed in the railcar area. DEC issued a Compliance Order By Consent to MAPCO in November 1986, directing that continued oil spill cleanup efforts be taken. More than 8,000 gallons of petroleum were collected from recovery wells at the refinery during February 1987, bringing the cumulative total of recovered petroleum to more than 80,000 gallons, since efforts began in 1985.

The refinery also has been identified by EPA as a potential site of hazardous substance contamination, pursuant to the Comprehensive Environmental Recovery, Compensation, and Liability Act of 1980 (CERCLA). The facility is listed as North Pole Refining (AKD000850701) for CERCLA purposes, although it has also been referred to as North Pole Refinery (AKD083350389). An inspection of the facility was conducted by Ecology and Environment, Inc. for EPA in 1980, but a report from that inspection is not in DEC's files. A Preliminary Assessment of the refinery was conducted in 1984 by Tetra Tech, Inc. for DEC. Tetra Tech reported that the facility had various hazardous substances on-site, but did not appear to generate hazardous wastes, since refinery wastes were either re-refined or returned to the

Trans-Alaska Pipeline System (TAPS). During 1986, Tryck, Nyman and Hayes (TNH) and their subcontractor, Shannon and Wilson, Inc., conducted Phase 1 of a two-phase CERCLA site investigation of the site for DEC. A Summary Memorandum from TNH to DEC in August 1986, reported additional information about the refinery based on a site visit by Mr. John Cronin, of Shannon and Wilson. The Tetra Tech and Tryck, Nyman and Hayes reports are provided in Appendix 5.

In Fairbanks, MAPCO also owns a bulk fuel storage facility at the Fairbanks International Airport. This facility formerly was owned by Chevron USA, who had notified EPA of hazardous waste generation activity at the facility and obtained EPA identification number AKD000835033. MAPCO was contacted by Jeff Mach in May 1984 for the purpose of determining the facility's RCRA status. MAPCO reported that the facility had not generated any hazardous wastes.

Based on the foregoing information, DEC had planned to conduct a RCRA hazardous waste management compliance evaluation inspection of the refinery, as a potential RCRA non-notifier, during March 1987. After receiving reports that the refinery was improperly disposing of hazardous wastes into TAPS, on March 4, 1987, EPA Region 10 requested DEC to conduct a RCRA hazardous waste compliance evaluation inspection of the facility as soon as possible. Subsequently, an unannounced inspection of the facility was conducted the following day.

During the preparation of this report, after the inspection, additional telephone conversations between Jeff Mach and Msrs. Rowse and Hook were held to answer questions that arose. Jeff Mach and Larry Dietrick from DEC also interviewed a former employee of the refinery, who desired to remain anonymous, about activities at the facility during his employment in 1985 and 1986. A copy of this recorded interview and its transcript have been provided to EPA Region 10 separate from this report. Jeff Mach returned to the refinery on March 19, 1987 to take additional photographs and to further discuss container handling activities with Mr. Hook.

Citations of the regulatory requirements in §260 through §270 in this report, refer to the federal RCRA hazardous waste management regulations found in 40 CFR 260 through 270.

Introduction and Record Review:

MAPCO's North Pole refinery obtains crude oil for processing from TAPS, approximately two miles east of the facility, through an eight inch diameter pipeline. The refinery, as originally constructed, consisted of one 45,000 barrel per day distillation unit, that could produce approximately 17,000 barrels per day of JP-4, jet fuel, #1 and #2 heating fuel, diesel fuel, or turbine fuel. A second 45,000 barrel per day distillation unit and other equipment was added in 1985. That

addition increased production to approximately 29,000 barrels per day and added asphalt and gasoline production. Distillation residues are returned to TAPS through a six inch diameter, return pipeline. The refinery has approximately 500,000 barrels of tank storage capacity, including 400,000 barrels of product storage, 50,000 barrels of crude oil storage, a 30,000 barrel residual/slop oil tank, and a 4,680 barrel oil/water separator tank. Two 20,000 pound per hour boilers supply steam throughout the distillation units portion of the facility. A diagram of the facility is provided in Appendix 1.

A below-grade sump system, open to the surface, runs throughout much of the facility. Leaks from equipment, tanks, or piping; water accumulations inside tank containments; and surface water runoff in the vicinity of the sumps, all can enter the sump system and are piped to Tank 192, the oil water separator. Aqueous material in the separator is decanted off from the bottom of the tank and is piped either to the wastewater lagoon, where it is supposed to evaporate naturally, or to one of the distillation furnace stacks, where it is injected and evaporated. Salts from the furnace stacks are cleaned out periodically. The stack salt has been analyzed, determined to be nonhazardous, and is taken to the Fairbanks North Star Borough Landfill for disposal. A copy of this waste analysis is provided in Appendix 6. Other refining process wastewater, such as from desalter treatment, also is piped to the lagoon and the furnace stacks. Currently, the facility has approximately 3,000,000 gallons of wastewater awaiting disposal, stored in two, 10,000 barrel tanks; inside bermed, storage tank containment areas; and in the wastewater lagoon. Recent samples of the wastewater indicate that it does not appear to fail the hazardous waste characteristics, although the characteristics were not specifically analyzed. A copy of this waste analysis is provided in Appendix 6.

According to Mr. Hook, oil separated in Tank 192 is normally piped to Tank 101, where it is mixed with incoming crude oil and is then rerefined. Oil from Tank 192 can also be piped to Tank 112, the residual/slop oil tank, where it is mixed with distillation residues and returned to TAPS. According to the former refinery employee interviewed by Mach and Dietrick, the oil separated in Tank 192 is more often piped to Tank 112, rather than Tank 101.

The refinery uses or has used a variety of chemical products in the production of petroleum products and in facility maintenance, which, if spilled or otherwise discarded, would be regulated as RCRA hazardous wastes. Material Safety Data Sheets (MSDS) for many of these products are kept at the facility. Emulsifiers and demulsifiers are used in the desalting process that removes salts from the incoming crude oil. Corrosion inhibitors are added to the oil stream to protect equipment. Methyl cellosolve® (2-methoxyethanol or ethylene glycol monomethyl ether) is added to military specification JP-4 fuel to absorb water. Tetraethyl lead is used as

an additive in the production of leaded gasoline. Sulfuric acid and possibly other acids have been used at the facility. Sodium hydroxide and hydrogen peroxide solutions also have been used by the refinery. Boiler treatment compounds are used in the boilers. -

Facility Inspection:

Upon arrival at the refinery at 10:20 am, Inspectors Mach and Miller met with Mr. Gerald Fritz, General Manager, and Mr. Dan Rowse, Engineering Manager. Initially, Mach and Miller presented their RCRA inspector's credentials and explained the purpose of the inspection. A discussion of the processes employed, the products produced, and the wastes generated by the facility followed. Records of waste analyses performed for the facility and the refinery's operations log were reviewed during the inspection. MSDS records for products used at the refinery were reviewed. Later in the inspection, interviews with Mr. Bob Hook, Operations Superintendent, and Mr. Brian Myers, Maintenance Superintendent, also were conducted. Inspectors Mach and Miller toured the facility with Messrs. Rowse and Hook during the inspection. A closing conference was held with Messrs. Fritz, Rowse, Hook, and Frank Johnson, Safety Manager. The inspection concluded at 4:50 pm.

Messrs. Fritz and Rowse reported that the MAPCO North Pole Refinery differs from most other refineries because of the limited number of products produced and because of the return pipeline to TAPS. They reported that the facility has not yet generated any of the K-series refinery wastes found in 40 CFR 261.32. Each of those potential waste streams were reviewed, as follows:

1. The refinery does not use dissolved air floatation and therefore, does not generate DAF float (K048).
2. Tank 112, holding residual and slop oils, has not been cleaned out since the refinery began operations. Mr. Rowse reported that he did not believe there would be much opportunity for the buildup of slop oil emulsion solids (K049) in the tank since the daily volume of return oil flow through the tank exceeds its storage capacity.
3. Mr. Rowse reported that because of the refinery's desalting process and the pre-flashing of the crude oil prior to distillation, the heat exchanger bundles have not required cleaning since the refinery began operations and therefore, heat exchanger bundle cleaning sludge (K050) has not been generated. However, TNH reported that the heat exchanger had been cleaned once and the waste was disposed of into the sump system. If this report could be substantiated, it may show an improper management of this listed waste. Mach and Miller were unable to verify this reported occurrence.

4. The facility's representatives claimed that API separator sludge (K051) is not generated, because the facility does not have an API separator. The inspectors were unable to determine whether the refinery's separator is considered an API separator sludge for the purposes of §261.32, since tank 192 uses only gravity separation, while an API separator is generally a compartmented, rectangular vessel, equipped with oil skimmers, flight scrapers, and sludge removal sumps. Mr. Rowse estimated that Tank 192 may contain from one to two feet of sludge that has never been removed, because it has not been observed in the discharge line when water is decanted. If sludge did leave Tank 192, it would be piped to the lagoon or the furnace stack. A recent sample analysis of the lagoon's sludge indicates that it does not appear to fail any of the RCRA hazardous waste characteristics, although the characteristics were not specifically analyzed. A copy of this waste analysis is provided in Appendix 6. As previously mentioned, the salt cleaned from the furnace stack does not exhibit any of the RCRA hazardous waste characteristics.
5. Finally, the leaded gasoline and tetraethyl lead storage tanks at the facility have not been cleaned since leaded gasoline production began in 1985, so leaded tank bottoms (K052) have not been generated.

One of the primary reasons for the inspection concerned allegations that drums of highly ignitable, corrosive, and "toxic polymer" wastes had been illegally disposed of by the refinery, by mixing them with return oil to TAPS. It was also alleged that a violent reaction, resulting in damage, had occurred at the blending and metering building while emptying containers of incompatible materials. The facility's activities that led to these allegations were investigated during the inspection and are discussed in the following paragraphs.

- * During the inspection, Mach and Miller visited the refinery's "boneyard," where there was an accumulation of containers. Mach and Miller observed approximately 100, 55 gallon drums and additional smaller containers in the area. According to Messrs. Rowse and Hook, these containers consisted of unused products, such as corrosion inhibitors, boiler treatment compounds, and sodium hydroxide; crude oil and return oil samples; oil spill cleanup materials; used clay filter material; asphalt samples; and some unknowns, that had been accumulated since the refinery began operation. Mach and Miller observed labels on drums and the contents of open drums, which generally confirmed that the information was correct. An October 1986 aerial photograph of the refinery, in DEC's possession, shows that more drums had been present in this area than were observed on March 5, 1987, although, it is not possible to accurately estimate the number of drums from the photograph.

According to Mr. Hook, a general cleanup of the boneyard was begun in the summer of 1986. The refinery began to organize and sort containers in the boneyard during October 1986.

According to Mr. Hook, beginning in late December 1986, containers from the boneyard were brought into the blending and metering building, where they were thawed, then emptied either into the sump system or by pumping them into the plumbing that leads to Tank 112 or to Tank 192. Mr. Hook indicated that the pump first had been connected to the piping that leads to Tank 192, but that it was changed to Tank 112, when just oily materials were to be transferred. The facility planned to add boiler treatment chemicals, corrosives, and other water soluble materials to the sump system and to pump corrosion inhibitors, crude oil samples, and other oil-based materials to Tank 112. After the containers were emptied, they were steam cleaned, crushed, and taken to the Fairbanks North Star Borough Landfill for disposal. Some empty containers were observed accumulated on-site.

Upon visiting the blending and metering building, Mach and Miller observed approximately 25 drums in two separate rooms. One room of the building contained 12 drums and had steam lines set around several of the drums and a mixer set in one drum. This room also contains the pump used to transfer materials to either Tank 192 or Tank 112. The labels on these drums indicated that they contained 50% hydrogen peroxide solution, sodium hydroxide solution, methanol, and Nalco corrosion inhibitor. Several of the drums were empty. According to Messrs Rowse and Hook, the full drums had been identified as useable products and the facility was planning to use them. On March 19, Jeff Mach observed four drums in this room that were spray painted "SULF," which, Mr. Hook reported, held material collected from the sulfolane system. This material is discussed later in the report.

A second room in the building contained 18 drums that displayed a variety of labels, including Tolad, a pour point depressant; Dowanol EM, an ethylene glycol monomethyl ether (also known as methyl cellosolve®); and Ambitrol, a corrosion inhibitor for ethylene glycol systems. Mr. Hook indicated that these drums were thawing, so the contents could be checked. No employees were observed working in the building or with these drums at the time of the inspection. When Jeff Mach visited the room on March 19, many of the remaining drums from the boneyard were staged there, approximately 50 in all, awaiting characterizations as useable product, recyclable material, or waste.

Messrs. Rowse and Hook reported that the refinery had emptied into the sump system or pumped to the tanks only those drums whose contents had been identified sufficiently to allow a determination that the material was either

compatible with crude oil, so it could be rerefined or returned to TAPS or that the material would mix with the wastewater in Tank 192 and be neutralized. The contents of containers were characterized by knowledge of the material or by rudimentary testing in the refinery's laboratory. Mr. Hook did not believe that the laboratory kept records of the tests on file. According to Mr. Hook, the majority of the drums emptied into the sump system since December consisted of old, unused drums of corrosion inhibitors, boiler treatment chemicals, and approximately six drums of sodium hydroxide. In terms of being regulated as RCRA wastes, corrosion inhibitors are usually ignitable characteristic hazardous wastes (D001), boiler treatment chemicals may be ignitable (D001) or corrosive (D002) characteristic hazardous wastes or nonhazardous wastes, and sodium hydroxide is a corrosive characteristic waste (D002). Mr. Hook later admitted that it was possible that employees emptying the containers may not have understood supervisors' instructions that drums of aqueous material were to be added to the sump, while oily materials were to be pumped to Tank 112, so that aqueous materials may have been pumped to Tank 112 by mistake. Such a misunderstanding of instructions may also account for a reaction between incompatible materials that reportedly occurred.

Mach and Miller were unable to identify any damage in the blending and metering building that could have resulted from a violent reaction between incompatible materials and the refinery staff did not report any such incidents on March 5. In a conversation after the March 5 inspection, Mr. Hook offered an explanation about such an apparent incident, after reading about the allegation in press reports and talking with employees. According to Mr. Hook, while pumping drums into the pipe to Tank 192, workers had finished pumping out a drum of an oily material and then, put the pump's suction pipe into an unmarked drum of 50% hydrogen peroxide. The reaction between the peroxide and the residual oil on the suction pipe caused the drum to begin foaming. The peroxide also destroyed the seals in the pump, causing liquid to begin leaking from the pump. The workers reportedly recognized what was happening, removed the suction pipe from the drum, and turned the pump off. Further pumping of drums had to be stopped until the pump was repaired. An entry about this incident was not seen in the refinery's operations log, when it was reviewed on March 5. It appears fortunate that this reaction was as small as it was, occurred as suddenly as it did, and disabled the pump. Had 50 gallons of a strong peroxide solution been pumped into the residual/slop oil tank, a much larger reaction would have taken place, which could have caused damage to the facility. This incident appears to indicate that the facility was not careful to characterize the containers, note their contents, and segregate incompatible materials before emptying them for neutralization or recycling.

Mach and Miller inquired about the potential for the generation of "toxic polymers" from the refinery's processes. Mr. Rowse reported that polymers could be generated by oxygen leaks into the refinery's sulfolane system. Sulfolane, a solvent, is used in a closed system to selectively extract aromatic petroleum fractions for use in gasoline production. The sulfolane is normally regenerated and reused repeatedly. Mr. Rowse stated that the refinery's sulfolane system is tight and that the facility has not experienced any significant generation of polymers. No containers marked to indicate that they contained polymers were observed by Mach and Miller at the facility on March 5. However, as mentioned previously, on March 19, Mr. Hook indicated that four drums in the blending and metering building, marked as "SULF," contained materials collected from the sulfolane system. Mr. Hook reported that the facility would try to recover useable sulfolane from the top of the containers and would return the heavier polymers to TAPS. He thought that the polymers might qualify as ignitable hazardous wastes because of their aromatic content. Based on reference information, sulfolane itself, if discarded, would not be regulated as a RCRA hazardous waste. If returned into TAPS for recycling, the polymers appear to be excluded from RCRA regulation by §261.6(a)(3)(vi).

Based on entries in the refinery's operations log, reviewed by Jeff Mach on March 5, the facility's container handling activities appear to have been conducted on an irregular basis, with a maximum of about 12 drums emptied during any single day. The entries in the log about these activities appeared to be general in nature and did not identify specific materials emptied into the sump system, although a count of the containers was kept. According to notes in the refinery's operations log, approximately 180 drums had been emptied, steam cleaned, and crushed as of March 5, 1987. Messrs. Rowse and Hook reported that some of these drums were empty or nearly empty when they were brought in from the yard. A copy of the operations log's entries related to the cleanup of containers from the boneyard was requested, but MAPCO has not yet agreed to provide a copy, because the log also contains entries that they judge to be confidential business information. Presently, the operations log is being reviewed by MAPCO Petroleum's general counsel, Mr. Randolph Jones, in Tulsa, to determine their response to Mach's request.

The container storage, recycling, and neutralization activities at the refinery appear to be in violation of several RCRA requirements. The facility's staff did not recognize that the contents of at least some of these containers were recyclable materials or hazardous wastes regulated by RCRA. During the inspection, the refinery's staff appeared to be surprised to learn that the facility's material recycling, waste storage, and waste neutralization activities were regulated under RCRA's hazardous waste requirements. Consequently, the facility's compliance with the recyclable materials requirements in §261.6, the Generator Standards in §262, and the Storage Facility Standards in §264 are poor. Examples of noncompliance in

these areas are the lack of records for waste analyses, the failure to notify EPA of hazardous waste and recyclable materials generation and storage, the failure to comply with the accumulation and storage requirements for hazardous wastes and recyclable materials.

Hazardous wastes introduced to the sump system or the tanks for recycling are regulated by the RCRA Generator Standards, unless they are excluded by §261.6(a)(2) or (a)(3) when recycled. Some of the materials introduced to the sump system or the tanks at the refinery may qualify for recyclable material exclusions under §261.6(a)(3)(iii), as "used oil" destined for recycling, or under §261.6(a)(3)(vi), as "oil reclaimed from hazardous waste resulting from normal refinery practice, which is to be refined along with normal process streams at a petroleum refining facility." However, many of the containers at the refinery, including those that contain unused, discarded products are not excluded by the provisions of §261.6(a)(3) from the requirements in §261.6(b) and (c), if they are recycled. The facility has not complied with the applicable Generator Standards in §262 for recyclable materials; the applicable requirements in §264, §265, and §270 for the storage of recyclable materials; or the notification requirement in Section 3010 of RCRA, all required by §261.6(b) and (c).

Corrosive characteristic hazardous wastes added to the sump system or the tanks to neutralize them are subject, at a minimum, to the Generator Standards in §262 and also may be subject to the storage requirements of the Treatment, Storage, and Disposal (TSD) Facility Standards in §264, depending on their length of storage prior to neutralization. The refinery has not complied with either of these sets of requirements for their corrosive wastes.

The introduction of hazardous wastes into the sump system or the tanks does not appear to constitute disposal as defined by RCRA, if the wastes do not enter the environment and are neutralized or recycled. For the same reason, the introduction of hazardous wastes into TAPS for neutralization or recycling also does not appear to fall within the definition of disposal, although in the case of particular wastes, this may constitute an improper method of waste management. One area that EPA may wish to explore further is whether the transportation of recyclable materials via TAPS and tankers to refineries also is regulated under §261.3(b). Recyclable materials are added to the crude oil carried by TAPS at North Slope oil production facilities and probably, at the pump stations along TAPS, as well as at this facility.

Acids may have been used at the facility. Early information about the refinery indicated that sulfuric acid would be used to control pH during processing, but its actual use has not been confirmed. Mr. Rowse reported that no acids presently are used in any of the facility's processes. Maintenance operations are known by DEC

to have used acid to descale water pipes at the facility. Mr. Rowse reported that muriatic acid had been used on one occasion, to etch concrete at the facility. The former refinery employee reported to DEC, that in September 1986 he helped to move four to six drums of unidentified acid from the maintenance storage yard to the wastewater lagoon and dump them into the lagoon. If this incident could be substantiated, it would be a case of improper elementary neutralization, since a surface impoundment does not meet the definition of an elementary neutralization unit. A sample of the lagoon's wastewater analyzed in February 1987, showed the lagoon to have a pH of 8.5 (see Appendix 6). No containers of acids were observed by Mach or Miller at the facility during the inspection.

The maintenance shop uses Navy Brand safety solvent, according to Mr. Myers, Maintenance Superintendent. An MSDS for the product, on file at the facility, clearly identifies that the product consists of mineral spirits and greater than 30 percent 1,1,1-Trichloroethane and methylene chloride. The solvent is used in a dip tank of approximately 40 gallon capacity, located in the maintenance shop. When the solvent in the dip tank periodically is changed, the used solvent is drained to the facility's sump system, which leads to Tank 192, the oil water separator. This waste solvent is a listed hazardous waste (F001 or F002), under §261.31. Since the solvent's constituents are nearly insoluble in water, the waste solvent probably mixes with oils in the separator tank. From Tank 192, the waste would be piped to Tank 101 for rerefining or to the TAPS return line via Tank 112. According to Mr. Rowse, between March 1986 and February 1987, the facility used seven drums of this product.

The waste solvent from the maintenance shop is improperly managed from a RCRA standpoint. Since neither this refinery nor other petroleum refineries that receive TAPS oil reclaim or produce these halogenated solvents, MAPCO's addition of this waste to either the incoming or outgoing oil flow constitutes sham recycling. The waste solvent does not qualify for the recyclable material exclusions provided in §261.6(a)(2) and(a)(3). At this refinery, any waste solvent in the incoming crude oil would evaporate during crude oil preheating, which constitutes disposal because of its discharge to the air. Additionally, since the facility's sumps are known to have had leaks prior to their repair, the introduction of F-listed solvent wastes into them before their repair may constitute illegal on-site disposal. As of March 19, the facility had begun to accumulate waste solvent in a container at the maintenance shop.

The refinery generates several types of filter wastes. Waste cartridge filters of various sizes are generated from coalescers and separators. Mr. Rowse reported that when these filters are removed from the processing equipment, they are air dried on the equipment skids, then disposed of at the Fairbanks North Star Borough Landfill. The refinery also uses a clay tower to filter kerosene, heating fuel, and

JP-4. The clay from this tower is changed once every two or three years, most recently in the summer of 1986. Mr. Rowse reported that this waste filter material was deposited in a lined pit, near the rail loading area, for weathering, prior to being landfilled. Drums containing used clay filter material were observed in the boneyard area. When removed, all of these filter wastes reportedly are saturated with petroleum. It is not clear that these wastes fail the ignitability characteristic (D001), since they are not liquids and do not appear to be capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes. The former refinery employee interviewed by DEC, reported that used cartridge filters used to be burned and buried on-site, along with other wastes. DEC has issued no waste disposal permits to the refinery for such activities and this allegation will require further investigation. It is not known whether these alleged disposal activities may involve hazardous wastes.

The facility uses tetraethyl lead (TEL) as an additive in the production of leaded gasoline and normally, TEL waste is not generated. The refinery receives periodic TEL shipments by railroad tankcar and stores the product in a tank, located inside a separate room in the blending metering building. The TEL storage tank is set inside a concrete containment and the entire room is constructed with a concrete floor and curbs. In the spring of 1986, a leak of TEL, estimated by Messrs. Rowse and Hook to be from one quarter to four gallons in size, occurred in the TEL storage room. The spilled material was cleaned up using absorbent materials and kerosene. The spilled material, cleanup materials, the leaking pipe flange, and the cleanup workers' protective equipment and clothes were packed into two 55 gallon drums. Inspectors Mach and Miller observed these drums of waste stored inside the TEL storage room during the inspection. Based on its weight, one kilogram of TEL would be approximately 21 ounces; less than what was reportedly spilled. This waste is listed in §261.33(e) as an acutely toxic hazardous waste (P110). The generation of more than 1 kilogram of discarded TEL and its on-site storage for more than 90 days requires the facility to comply with the Generator Standards in §262 and the TSD Facility Standards in §264. Potential violations of these standards by the facility are provided in Appendix 3. The facility apparently recognized that it needed to handle and dispose of this waste in a special manner, but aside from packaging it in proper containers, virtually none of the §262 or §264 hazardous waste management requirements have been met.

Inspectors Mach and Miller observed two groups of drums stored in an area west of the blending and metering building and north of the laboratory building. Mr. Rowse reported that these drums contained wastes from two sources: one group of approximately 30 drums contained oily debris collected from the wastewater lagoon; the second group of seven drums contained sludge cleaned out of the facility's sumps. Samples of these wastes had been collected and analyzed for the RCRA hazardous waste characteristics. Analytical reports for these groups of waste

were on file at the facility. Copies of the analytical reports were obtained by the inspectors and are provided in Appendix 6.

The analyses indicate that the group of approximately 30 drums did not fail any of the RCRA hazardous waste characteristics, but that the group of seven drums failed the ignitability characteristic (D001) and the EP toxicity characteristic for selenium (D010). These seven drums are estimated by Mach and Miller to weigh more than 1,000 kilograms. According to Messrs. Hook and Myers, the sludge was generated from the cleanout of two sumps at the facility on October 20, 1986. The generation of more than 1,000 kilograms of characteristic hazardous waste and its on-site storage for more than 90 days requires the facility to comply with the Generator Standards in §262 and the TSD Facility Standards in §264. Again, the facility apparently recognized that it needed to handle and dispose of this waste in a special manner, but aside from packaging it in proper containers and testing it, virtually none of the §262 or §264 hazardous waste management requirements had been met at the time of the inspection. These two groups of drums were shipped to Crosby and Overton in Kent, Washington on March 12, 1987, by Glean Inc. (Transporter number AKD980975916) of Anchorage, after MAPCO notified EPA of the refinery's hazardous waste activity and received an EPA identification number. A copy of the manifest is provided in Appendix 7.

The facility's contingency plan, a copy of which is on file with DEC, was reviewed for this inspection. The plan, written in 1982, does not discuss hazardous waste releases or emergencies, only petroleum spills. According to Mr. Hook, there is no specific hazardous waste training for the facility's employees, although safety training on the products used at the refinery is provided. These items constitute potential violations of §262 and §264, since it appears that the facility is regulated as both a RCRA hazardous waste generator and a TSD facility.

Sample Collection:

Samples were not collected as a part of the inspection. The temperature at the time of the inspection was near 0° F, which made the collection of samples from containers of potential wastes in the boneyard impossible. Based on information about the products used and the potential hazardous wastes generated by the refinery, provided through the interviews with the refinery staff, product Material Safety Data Sheets, and from the drum labels observed, the inspectors judged that potential hazardous wastes in the blending and metering building would almost certainly be classified as ignitable or corrosive characteristic hazardous wastes and not listed wastes. Because the refinery staff admitted that many of the materials in the containers would qualify as characteristic hazardous wastes, it did not appear that samples would help to establish additional violations of the Generator or TSD Facility Standards. Laboratory analyses of potential wastes for the hazardous waste characteristics would not provide additional information about

these materials.

Composite samples of both the incoming crude oil and the oil returned to TAPS from the refinery are collected during each week, by an automatic sampling device. The samples are split between MAPCO; Alyeska Pipeline Service Company, operators of TAPS; and Golden Valley Electric Association, operator of a power generation facility adjacent to the MAPCO refinery. By agreement, the samples are to be retained by each of the parties for a minimum of 90 days following collection. Both MAPCO and Alyeska representatives have reported to DEC that those oil samples collected beginning in at least December 1986 are being stored in a secure manner, because of the controversy surrounding the refinery's container handling activities.

Closing Discussion With Facility:

Inspectors Mach and Miller held a closing conference with Messrs. Fritz, Rowse, Hook, and Johnson. The inspectors advised the refinery staff that the facility appeared to be regulated by RCRA, because of the generation, neutralization, and storage of hazardous wastes and the recycling of recyclable materials. Mach and Miller advised the staff of the general nature of the violations observed during the inspection. The staff was advised of the need to become familiar with the RCRA requirements and of the need to notify EPA of the refinery's hazardous waste activities, since the facility planned to ship hazardous wastes to an off-site TSD facility. A RCRA hazardous waste activity notification booklet was given to the facility's staff and the inspectors advised the staff not to ship any RCRA hazardous wastes off-site until a RCRA notification had been filed and an EPA identification number obtained.

Conclusions:

The inspection has identified many potential violations of the RCRA Generator and TSD Facility Standards at the refinery. Most of the potential violations are classified as Class I violations, based on the EPA Enforcement Response Policy. A summary of specific potential violations is provided in Appendix 3. Those potential violations are broadly identified as follows:

1. The facility has not complied with requirements governing the management of recyclable materials.
2. The facility has generated and accumulated RCRA hazardous wastes in sufficient quantities to require compliance with the Generator Standards, but has not done so. The facility has done a poor job of determining whether its wastes are regulated as hazardous wastes and then, managing them properly. At the time of the inspection, the facility had not notified EPA of its hazardous waste generation or storage activities. Hazardous wastes stored on-site were not properly marked, dated, or inspected. The

facility does not have a contingency plan for hazardous wastes and does not provide hazardous waste training to employees.

3. The facility has stored more than one kilogram of acutely toxic waste and more than 1,000 kilograms of characteristic waste for more than 90 days, without a permit, and out of compliance with the majority of the TSD Facility Standards.

Because of the large number of apparent Class I violations, the facility should be considered a High-Priority Violator and an appropriate enforcement action should be initiated. DEC recommends the issuance of a Notice of Violation to the facility as soon as possible. A 3007 information request to the refinery also may be appropriate to elicit additional information about the reported use of the wastewater lagoon for acid neutralization, the use of the sump system and tanks for recycling and neutralization activities, the disposal of possible hazardous wastes on-site, and to formally request a copy of the refinery's operations log, if one is not otherwise forthcoming. The issuance of a Consent Order, requiring the facility's compliance with the Generator Standards; the submission of a TSD permit application, followed by closure of the hazardous waste storage areas; and the assessment of civil penalties, given the number of serious violations identified by this inspection, appear to be appropriate enforcement remedies.

Appendices:

1. Facility Diagram
2. Photographs
3. Summary of Potential Violations
4. RCRA Inspection Checklist
5. CERCLA Investigation Reports
6. Sample Analysis Records
7. Waste Shipment Manifest

Appendix 1
Facility Diagram

Appendix 2

Photographs

Appendix 2

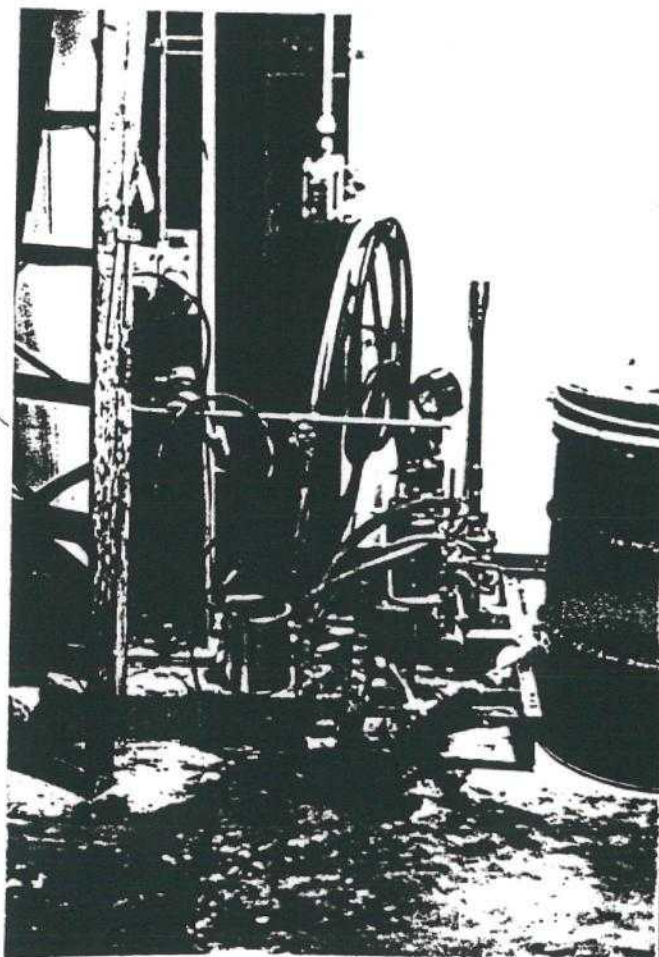
Photographs

Photograph notes:

All photographs were taken by Jeff Mach on March 5 or March 19, 1987, as noted. Photographs from March 5, 1987 were taken using a 35mm Olympus OM-1 camera, equipped with a 28mm/f1.4 lens. Photographs from March 19, 1987 were taken using a 35mm Canon A-1 camera, equipped with a 50mm/f 1.4 lens. On both days, Kodacolor VR-100 film was used.



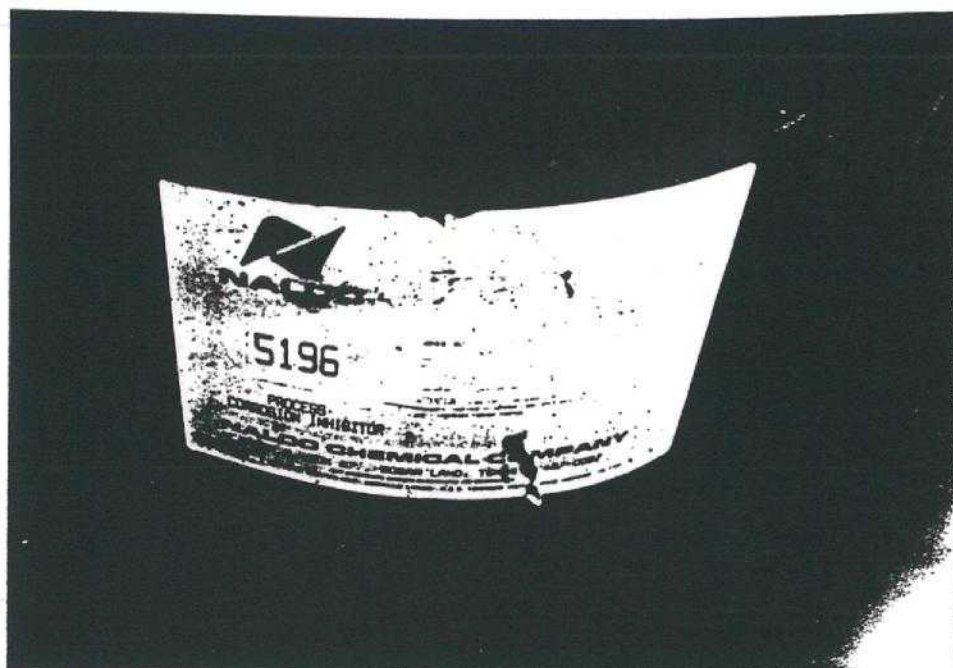
ABOVE:
3/19/87. 3:45 pm.
Drums of 50% hydrogen
peroxide solution in
maintenance shop yard at
MAPCO - North Pole
Refinery. These drums
were observed in the
blending and metering
building on 3/5/87.



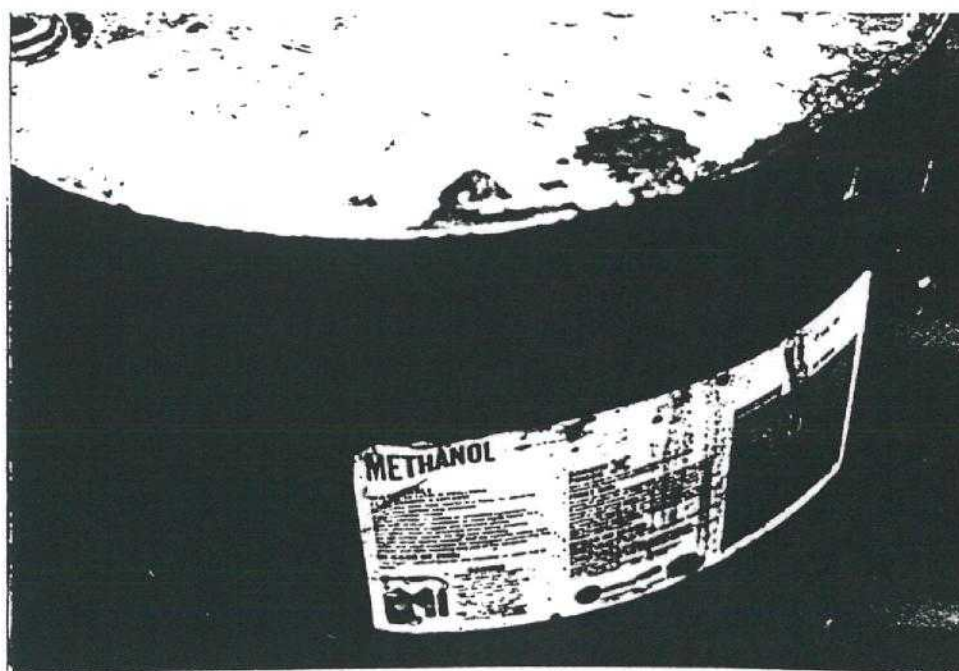
LEFT:
3/5/87. 3:30 pm.
Pump in blending and
metering building at
MAPCO - North Pole
Refinery used to transfer
drum contents to
plumbing. Suction pipe is
standing against the wall
behind the pump. The
discharge line is the
horizontal, small diameter
tubing in the center of the
photo.



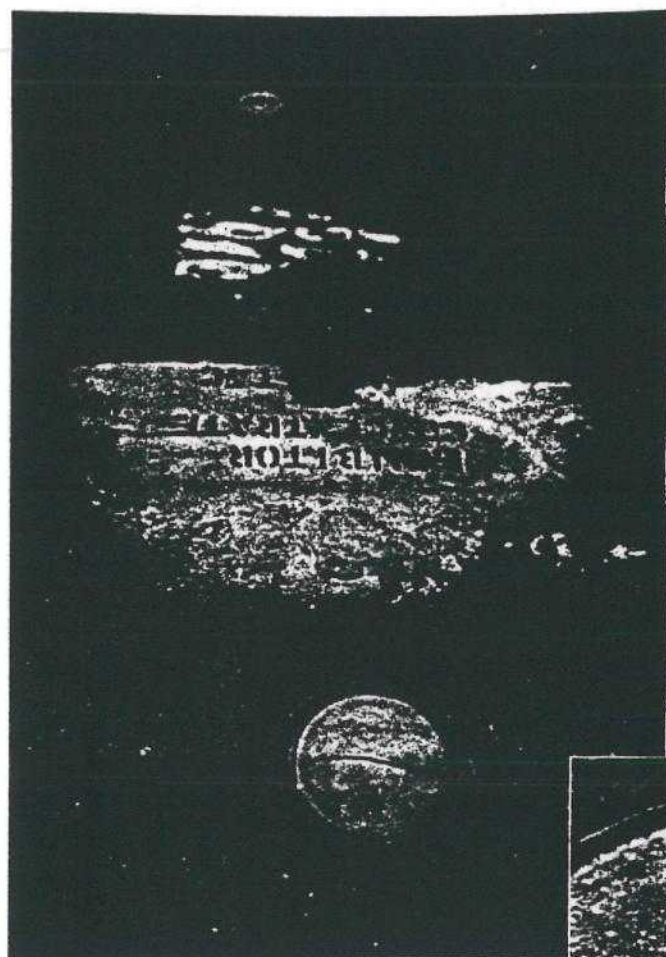
3/19/87. 3:30 pm. Label on drum moved from "boneyard" into blending and metering building at the MAPCO - North Pole Refinery.



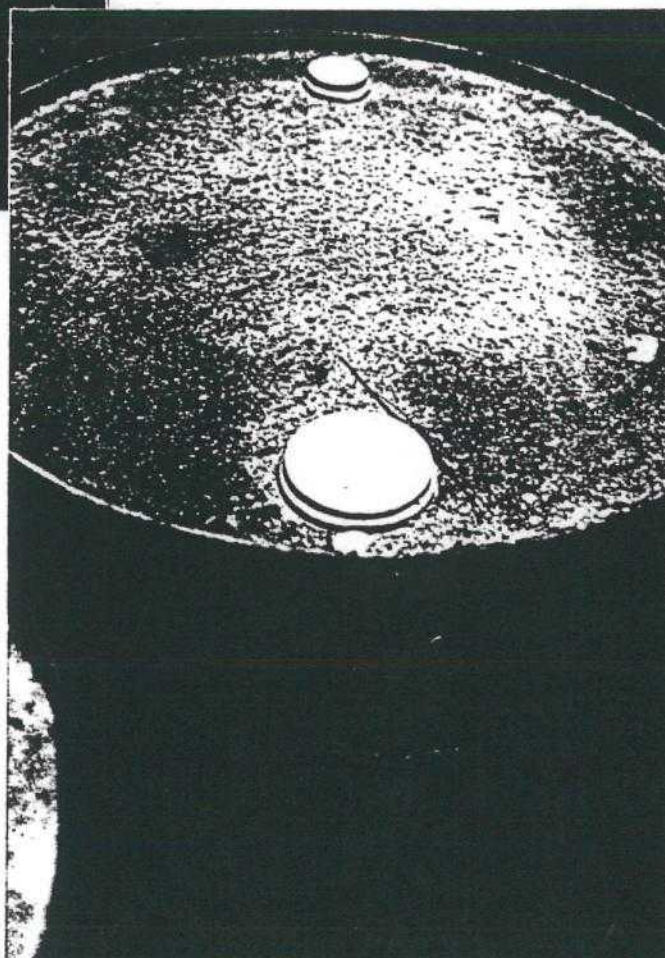
3/19/87. 3:30 pm. Label on drum moved from "boneyard" into blending and metering building at the MAPCO - North Pole Refinery.



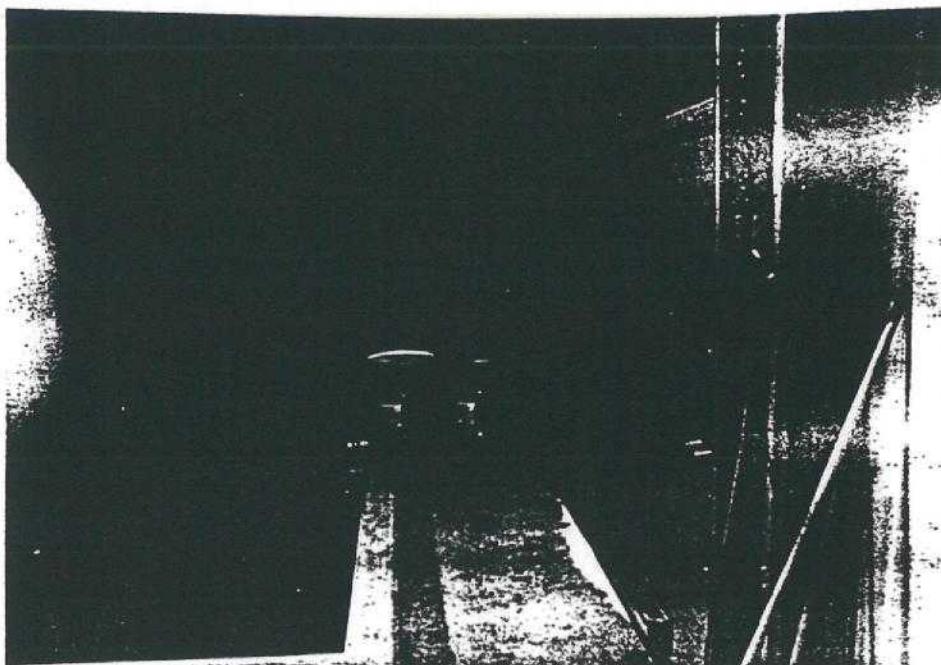
3/19/87. 3:30 pm. Label on drum moved from "boneyard" into blending and metering building at the MAPCO - North Pole Refinery.



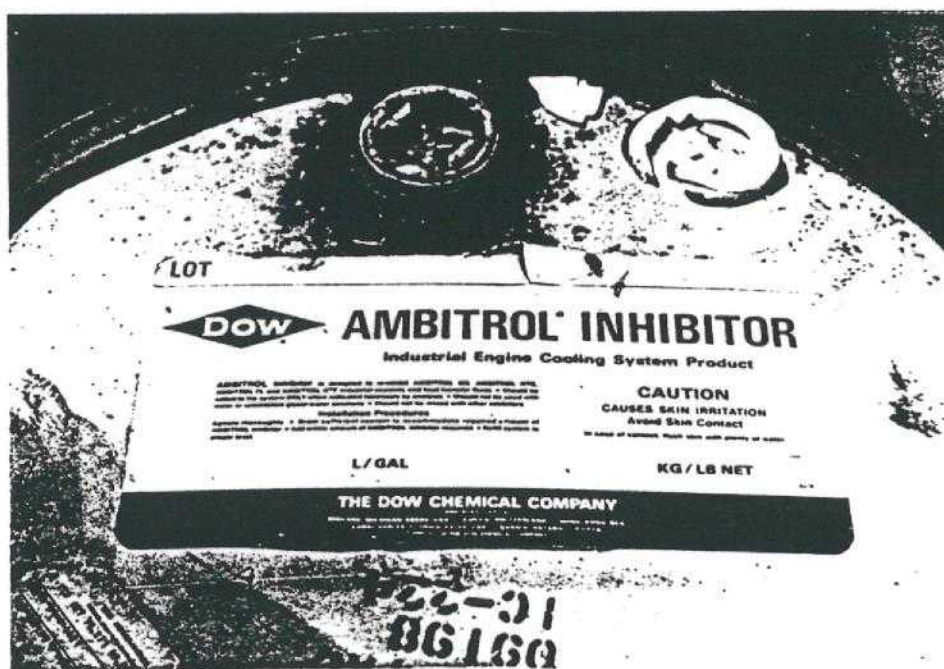
LEFT:
3/19/87. 3:30 pm.
Label on drum moved
from the "boneyard" into
the blending and
metering building at the
MAPCO - North Pole
Refinery.



RIGHT:
3/19/87. 3:30 pm.
Label on drum moved
from the "boneyard" into
the blending and
metering building at the
MAPCO - North Pole
Refinery.
Note the plastic
seals on bungs.



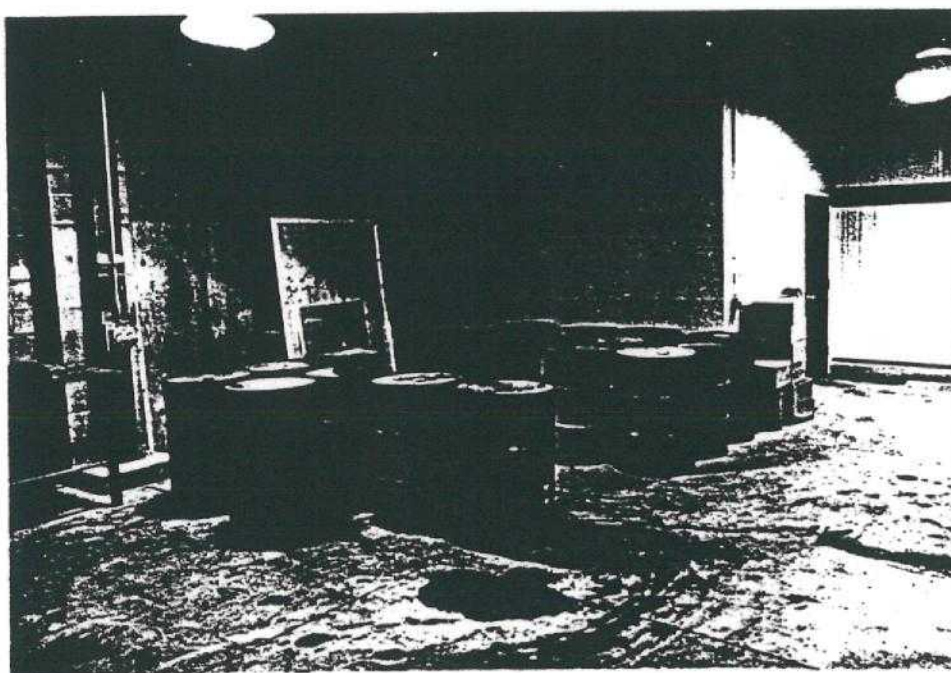
3/5/87. 3:10 pm Tetraethyl lead (TEL) waste stored in the TEL room of the blending and metering building at the MAPCO - North Pole Refinery.



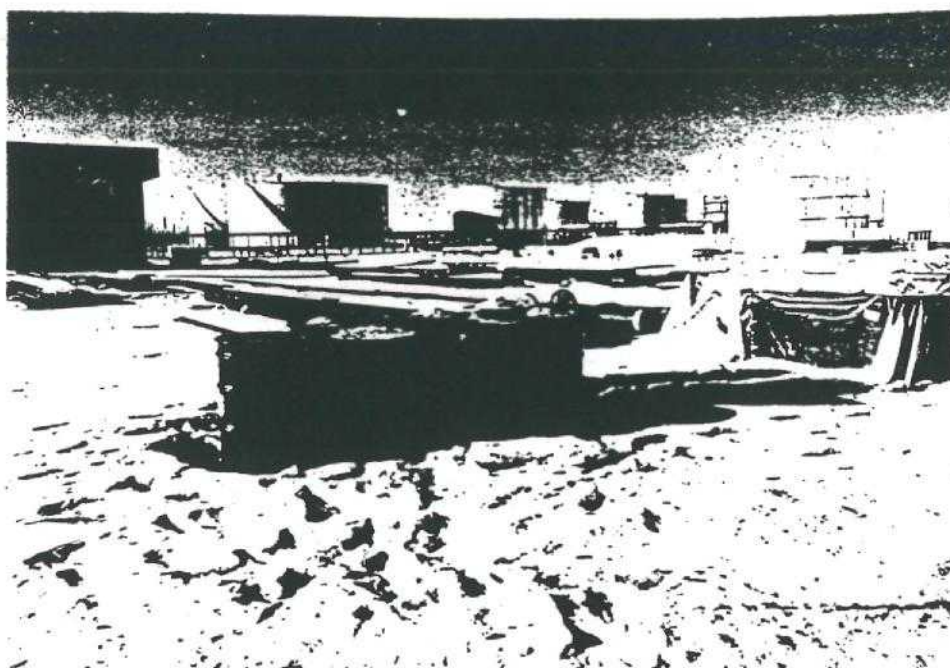
3/19/87. 3:30 pm. Label on drum moved from the "boneyard" into the blending and metering building at the MAPCO - North Pole Refinery. Note the plastic seal removed from the drum's bung.



3/5/87. 3:00 pm. Room in MAPCO - North Pole Refinery blending and metering building where drums were emptied into sump or plumbing. Sump is located in front of drum at middle left of photo. Pump is located at middle right of photo, behind drums. Note drum of sodium hydroxide solution in middle background and mixer in drum at center of photo.



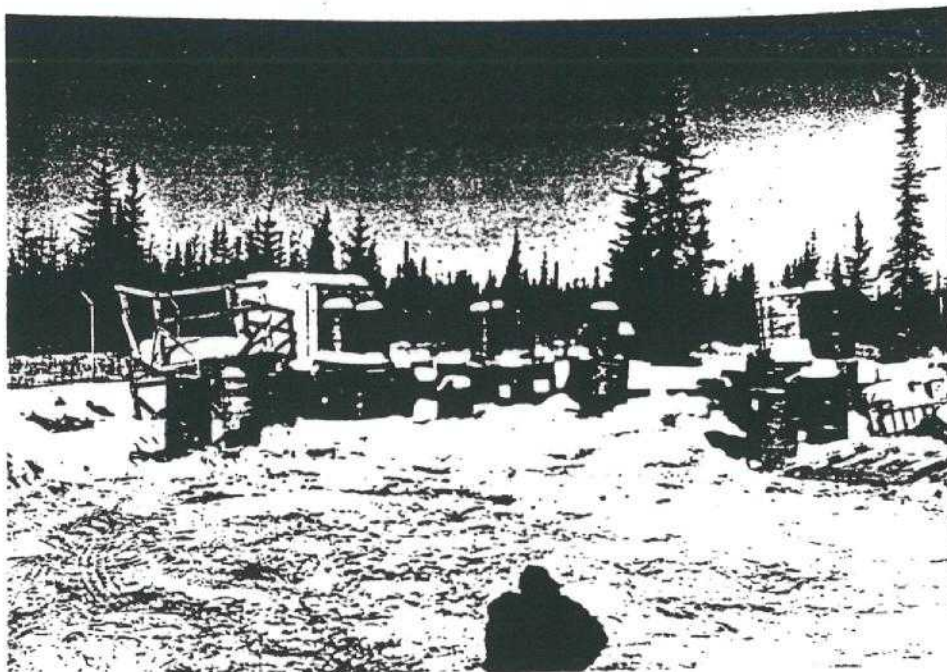
3/5/87. 3:00 pm. Room in MAPCO - North Pole Refinery blending and metering building, where drums from "boneyard" are thawed.



3/5/87. 2:50 pm. Ignitable/EP Toxic (D001/D010) sludge from sumps, stored in seven drums, north of the blending and metering building at the MAPCO - North Pole Refinery. Wastes were shipped off-site on 3/12/87.



3/5/87. 2:50 pm. Approximately 30 drums containing oily debris, stored under plastic sheeting, north of the blending and metering building at the MAPCO - North Pole Refinery. Wastes were shipped off-site on 3/12/87.



3/5/87. 12:05 pm. Containers in the "boneyard" of MAPCO Petroleum - North Pole Refinery. Site is located near the northwest corner of the facility. Small cans at right contain old crude oil and return oil samples.



3/5/87. 12:05 pm. Containers in the "boneyard" of MAPCO Petroleum - North Pole Refinery.

Appendix 3

Summary of Potential Violations

Appendix 3
Summary of Potential Violations.

- ✓ 1. §261.6(b) Failure to comply with applicable requirements of §262 and §263 and notification requirement of section 3010 of RCRA, when recyclable materials are generated and transported.
- ✓ 2. §261.6(c) Failure to comply with applicable provisions of §264, Subparts A through L, §270, and section 3010 of RCRA, when recyclable materials are stored before recycling.
- ✓ 3. §262.11 Failure to determine whether solid wastes generated by the facility are hazardous wastes.
- ✓ 4. §262.12 Failure to obtain an EPA identification number prior to the treatment and storage of hazardous wastes on-site.
- 5. §262.34(a)(1) Failure to comply with §265, Subpart I, for the weekly inspection of waste containers and to provide adequate separation of incompatible wastes in storage.
- 6. §262.34(a)(2) Failure to mark accumulation dates on waste containers.
- 7. §262.34(a)(3) Failure to mark waste containers with the words "Hazardous Waste."
- 8. §262.34(a)(4) Failure to comply with §265, Subpart D, requiring a hazardous waste contingency plan, and §265.16, requiring a hazardous waste training program for facility employees.
- 9. §262.34(b) Storage of hazardous wastes on-site for more than 90 days, without an extension granted by EPA.
- 10. §264.11 Failure to obtain an EPA identification number prior to the storage of hazardous wastes for more than 90 days.
- 11. §264.13 Failure to develop and follow a written waste analysis plan and obtain waste analyses prior to storing hazardous wastes for more than 90 days.
- 12. §264.14 Failure to provide adequate security to prevent unknowing persons from coming into contact with hazardous waste.

13. §264.15 Failure to comply with general inspection requirements for hazardous waste storage.
14. §264.16 Failure to develop, conduct, and keep records on personnel training related to hazardous waste management at the facility.
15. §264.17 Failure to take required precautions during the storage and treatment of ignitable and incompatible hazardous wastes.
16. §264.35 Failure to maintain required aisle space between containers while storing hazardous waste.
17. §264.51(a) Failure to develop a contingency plan for the storage and treatment of hazardous wastes.
18. §264.54 Failure to maintain a copy of the contingency plan at the facility and submit it to local emergency response agencies.
19. §264.112(a) Failure to develop a written closure plan for the hazardous waste management facility.
20. §264.142 Failure to develop a written closure estimate.
21. §264.143 Failure to establish financial assurance for closure.
22. §264.174 Failure to make weekly inspections of hazardous waste containers in storage.
23. §264.175 Failure to provide a containment system in hazardous waste container storage areas.
24. §264.177(c) Failure to adequately separate containers holding incompatible hazardous wastes during storage.
25. §270.10 Failure to apply for a permit to store hazardous wastes for longer than 90 days.

Appendix 4
RCRA Inspection Checklist

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

Region 10 Inspection Checklist

Purpose--This checklist is designed to serve as a guideline to the major points of the regulations adopted pursuant to RCRA for inspectors to use while visiting hazardous waste (HW) regulated facilities. This checklist should not serve as a substitute for a detailed knowledge of the relevant regulations. The following is the outline of the checklist.

- I. General Information
- II. Small Quantity Generator (SQG) Regulations (40 CFR 261.5)
- III. Generator Regulations (40 CFR 262)
- IV. Transporter Regulations (40 CFR 263)
- V. Treatment, Storage, and Disposal (TSD) Interim Status Regulations (40 CFR 265)
- VI. Treatment, Storage, and Disposal (TSD) Permit Status Regulations (40 CFR 264)

I. General Information (Date Revised March 8, 1983)

- A. Inspection: Type of Inspection: Evaluation (☒); Sampling ();
Record Review (); Special (); Follow-up;
Date/Time Inspection commenced: MARCH 5, 1987 1030 AM
- B. Facility
EPA/State ID NON-NOTIFIER (AKD 000850701 - 3/12/87)
Name & Address NARCO PETROLEUM - NORTH POLE REFINERY
1. Mailing: 1100 H # H LANE
2. Location: 1100 H # H LANE
NORTH POLE, AK. 99705
- Contact: MR. DAVE ROWSE - ENGINEERING MGR.
Telephone: (907) 488-2741

C. <u>Compliance Summary</u>	<u>IN</u>	<u>OUT</u>	<u>N/A</u>
RCRA (Statute)	()	(<input checked="" type="checkbox"/>)	()
40 CFR 270	()	(<input checked="" type="checkbox"/>)	()
40 CFR 124	()	()	(<input checked="" type="checkbox"/>)
40 CFR 261.5	()	()	()
40 CFR 262	()	(<input checked="" type="checkbox"/>)	()
40 CFR 263	()	()	(<input checked="" type="checkbox"/>)
40 CFR 264 (Permit)	()	(<input checked="" type="checkbox"/>)	()
40 CFR 265	()	(<input checked="" type="checkbox"/>)	()

Specific Violations: SEE SUMMARY OF POTENTIAL VIOLATIONS PROVIDED IN APPENDIX 3

D. Inspector

Inspector JEFF MAXH ENV. FLD OFFICER
Name (Print) GLENN MILLER Title: ENV. ENG
Signature [Signature]
Organization AK DEPT. OF ENVIRON. CONSERVATION
Phone (907) 452-1714 (907) 465-2666

E. Inspection Participants:

Name	Title	Phone #
G. FRITZ	GENL. MGR.	(907) 488-2741
D. RONSE	ENG. MGR.	SAME
B. HOOK	OP. SUPT.	SAME
B. MYERS	INDINT. SUPT.	SAME
F. JOHNSON	SAFETY MGR.	SAME

F. Notification/Permit Information

1. Started operation: 10/77 Date: _____
2. Notification filed: YES ☒ NO * Date: _____
3. Part A application filed: YES ☒ NO Date: _____
4. Part B called/Date Due YES NO Date: _____
5. Part B application: YES NO Date: _____
6. Changes in Notification or Part A: * FACILITY FILED
NOTIFICATION AFTER INSPECTION.
7. Facility's classified as: _____

- Generator
- Transporter
- Treatment facility
- Storage facility
- Disposal facility
- Small quantity generator
- Recycler
- Less than 90 day storage
- Wastewater treatment unit exemption (WWTU)
- Elementary neutralization unit exemption (ENU)

8. Does facility have a Part A withdrawal request in ?
YES NO

Status

Comments: FACILITY MAY BE REGULATED AS A
TRANSPORTER BECAUSE OF RECYCLABLE
MATERIALS RETURNED TO TANK.

G. Hazardous Waste Generation (HW) and Management (List EPA Waste Code)

1. General information SEE REPORT NARRATIVE

a. Characteristic HW (DXXX)?

- (1) Ignitability D001 - VARIOUS WASTES
- (2) Corrosivity D002 - VARIOUS WASTES
- (3) Reactivity
- (4) EP Toxicity D010 - SUMP SLUDGE (SELENIUM)

b. Listed HW?

- (1) HW from non-specific sources (FXXX)
F001/F002 - SPENT SOLVENT
- (2) HW from specific sources (KXXX)
POTENTIAL K050 - HEAT EXCHANGER SLUDGE
& K051 - API SLUDGE

c. Discarded commercial chemical product (PXXX or UXXX)

- (1) PXXX P110 - TETRAETHYL LEAD
- (2) UXXX

d. Has facility petitioned to delist waste? YES ☒ NO

Date: _____ Comments: _____

e. Does facility qualify for WWTU or ENU? ☒ YES ☐ NO
FACILITY NEUTRALIZES CORROSIVES
Comments: IN SUMP SYSTEM & TANK 192.

f. Has a determination been made for each waste generated that it is or is not a RCRA hazardous waste? NO

- (1) What are the wastes generated? VARIOUS - SEE NARRATIVE
- (2) How was the hazardous waste determination made for each waste (i.e., lab analyses, knowledge of waste streams or processes, waste listed in Part 261)?

Comments: SOME KNOWLEDGE, SOME LAB ANALYSES (FEW RECORDS). WASTE CHARACTERIZATION IS POOR OVERALL

(3) Are records available on the determination(s)?

☒ YES ☐ NO
SOME.

- (4) Are all hazardous wastes noted during inspection listed on the facility's RCRA notification/ Part A application?

YES

UNKNOWN - 3/2
(NO)

If so explain.

2. Specific information

Provide the following information for each of the individual HW streams listed above. (Complete a separate form for each HW.)

SEE NARRATIVE REPORT.

- a. EPA HW Code
- b. HW description
- c. Composition (including sampling requirements)
- d. Process producing waste:
- e. Rate of waste production
- f. Time of storage
- g. Waste handling prior to disposal
- h. Waste disposal practice and manifest
- i. Reporting and recordkeeping
- j. Comments

H. Miscellaneous Notes:

II. Small Quantity Generator (SQG) Regulations 40 CFR 261.5 (Date
Revised March 8, 1984)

NOT APPLICABLE

A. General

1. Has the generator ever accumulated more than 1000 kilograms of D, F, K or U coded HW or 1 kilogram of P coded HW [261.5(f)]? YES NO
- a. If yes, is the waste stored in containers or tanks?
- b. Is any HW stored in waste piles or surface impoundments? YES NO

B. Small Quantity Generator (SQG) Regulations

1. Has generator determined if he generates a hazardous waste (262.11). YES NO
2. Which of the following describes the SQG's treatment and/or disposal of his HW?
- a. occurs on-site YES NO
- b. ensure delivery to an off-site facility, either of which is:
- (1) permitted under Part 270 YES NO
- (2) in interim status under Part 270 and 265 YES NO
- (3) authorized to manage HW by an authorized state YES NO
- (4) permitted, licensed or registered by a State to manage municipal or industrial solid waste; or YES NO
- (5) (a) facility which
- (a) beneficially uses, re-uses recycles or reclaims his HW YES NO
- (b) treats his waste prior to use, re-use, recycle, or reclamation YES NO
3. Does generator manifest his wastes (not required)? YES NO

III. Generator Regulations 40 CFR 262 (Date Revised March 8, 1984)

- A. Is the facility or does facility claim to be a small quantity generator?

YES ☒ NO

Comments: _____

- B. Does generator transport its own waste?

YES ☒ NO

1. If NO, what is contractor's EPA ID, name, address, and phone? *SEE REPORT NARRATIVE*
2. If YES, see Transporter Regulations (Section III).

- C. Does generator use the manifest system?

3/12/87
YES ☒ NO

1. Does the Generator ever offer his hazardous waste to transporters or to TSD facilities which do not have an EPA ID number?

YES ☒ NO

What transporters or TSD facilities?

*CROSBY & OVERTON, KENT WA.
WAD 991281767 - SEE APPENDIX 7.*

2. A generator transporting or offering for transport hazardous waste for off-site TSD must first prepare a manifest.
3. If the waste is undeliverable to the primary or alternate facility, the generator must either designate another alternate facility or instruct the transporter to return the waste.

Does the manifest contain the following information:

3/12/87

- a. Manifest document number
- b. Generator's name, mailing address, phone number, and EPA ID number
- c. Name and ID number of each transporter
- d. Name, address and EPA ID number of the designated and alternate TSD facilities, if any.
- e. Description of waste(s) required by DOT regulations in 49 CFR 172.101, 172.202, 172.203.

☒ YES ☒ NO

☒ YES ☒ NO

☒ YES ☒ NO

☒ YES ☒ NO

☒ YES ☒ NO

- Proper shipping name ☒ YES NO
- Hazard Class ☒ YES NO
- Identification number ☒ YES NO
- f. Total quantity of each hazardous waste by units of weight or volume and type and number of containers placed aboard transport vehicle. ☒ YES NO
- 4. Does the manifest contain the certification attesting to proper classification, description, packaging, labeling, marking and condition in accordance with DOT and EPA regulations? ☒ YES NO
- 5. Does the manifest contain an adequate number of copies to provide one copy for:
 - a. Generator's records ☒ YES NO
 - b. Records of each transporter ☒ YES NO
 - c. TSD facility owner or operator's records ☒ YES NO
 - d. Signature by each transporter and return to generator ☒ YES NO
 - e. Signature by TSD facility and return to generator ☒ YES NO
- 6. Does the generator use the manifest properly by:
 - a. Signing the certification ☒ YES NO
 - b. Obtaining signature and date of acceptance from initial transporter ☒ YES NO
 - c. Retaining one copy of the transporter's signed manifest for 3 years or until receipt of a signed copy from disposal facility YES NO N/A
YES.
 - d. Giving transporter the remaining copies of the manifest ☒ YES NO
- 7. Does the generator contact the transporter and/or the designated TSD facility to determine the shipment status in the event that a signed copy from the designated facility has not been received within 35 days? YES NO N/A
YES.

8. Does the generator submit an Exception Report to the U.S. EPA in the event that a signed copy of the manifest has not been received from the designated TSD facility within 45 days?

N/A YET. ()
YES NO

9. The Manifest Exception Report must include
- A legible copy of the manifest and
 - A letter of explanation describing efforts and results of status investigation.

***** TSD FACILITIES SKIP TO MODULE V *****

- D. Does generator operate a specific area on-site for container handling or storage?

YES ☒ NO

1. Does generator comply with the requirements set forth in governing on-site waste accumulation:

YES ☒ NO

- a. Labeling and marking

YES ☒ NO

- b. Dating

YES ☒ NO

- c. Inspections (weekly for containers)

YES ☒ NO

2. Are incompatible wastes segregated?

YES ☒ NO

3. What quantities of HW are stored? SEE REPORT

4. What is the longest period that it has been stored? SINCE APPROX. 1977 IN SOME CASES.

5. Were there any hazardous wastes stored on site at the time of inspection? (90 day storage allowance is allowed only if waste is stored in accordance with §262.34; i.e. must be stored in containers or tanks. Thus need to make note if storing in waste pile, etc.)

☒ YES ☒ NO

- a. If yes, do they appear properly packaged (if in containers) or, if in tanks, are the tanks secure?

☒ YES ☒ NO

- b. If not properly packaged or in secure tanks, please explain.

YES NO

- c. Are containers clearly marked and labeled?

YES ☒ NO

- d. Do any containers appear to be leaking?

YES ☒ NO

- e. If yes, approximately how many? _____

6. Generators may store hazardous waste for less than 90 days without a permit or TSD status providing certain requirements have been met.

~~YES~~ ~~NO~~

a. Are the containers made of or lined with materials which will not react with and are compatible with the hazardous waste to be stored in them?

☒ YES ☐ NO

b. Are the containers always closed, except to add or remove waste?

☒ YES ☐ NO

c. Are container storage areas inspected weekly for leaks and container deterioration (40 CFR 265.174)?

YES ☒ NO

d. Are precautions taken to prevent accidental ignition or reaction of ignitable or reactive waste?

YES ☒ NO

e. Are containers holding ignitable or reactive waste located at least 50 feet from the facility's property line?

☒ YES ☐ NO

f. Is the facility aware of and complying with the following requirements for incompatible wastes:

(1) Incompatible wastes must not be placed in the same containers, unless in compliance with 265.17(b)

☒ YES ☐ NO

(2) HW must not be placed in an unwashed container that previously held an incompatible waste

☒ YES ☐ NO

(3) Are storage containers holding HW that are incompatible with any waste or other material stored nearby separated from or protected from them by means of a dike, berm, wall, or other device?

YES ☒ NO

Explain? NO SEGREGATION OF CONTAINERS OF INCOMPATIBLES IN 'BONEYARD'

g. Are containers marked or labeled in a manner equivalent to 40 CFR 172 subpart E?

YES ☒ NO

h. Comments:

7. a. Does the generator import or export HW? YES NO
- b. If yes, has notification of this activity been submitted to the EPA Regional Administrator? YES NO
- c. Is a copy of that notification available? (If yes, obtain copy). YES NO
- d. If a copy is not available, or can not be obtained, determine: 1) when the notification was submitted; 2) for what waste type and; 3) for what foreign facility (name and address). YES NO

8. TANKS

TANKS USED FOR RECYCLABLE MATERIALS

Where tanks are used to store hazardous waste, the requirement of 40 CFR Part 265 Subpart J must be complied with (except 265.193), as follows:

- a. Is storage in tanks conducted such that:
- (1) It does not generated heat, pressure, fire, explosion or violent reaction? (If no, explain) YES NO
- (2) It does not produce uncontrolled toxic mists, fumes, dusts, or gases? (If no, explain) YES NO
- (3) It does not produce uncontrolled flammable fumes or gases? YES NO
- (4) It does not damage the tank? YES NO
- (5) It does not threaten the environment in other ways (i.e., leaks, spills)? YES NO

Comments:

- b. Is 2 feet of freeboard maintained in uncovered tanks? YES NO N/A
- If no, is secondary containment used? YES NO
- (Explain)
- c. Is the tank(s) continuously fed? YES NO
- If yes, is there a means to stop inflow? YES NO
- Explain VALVES

d. Are inspections of the following conducted:

UNKNOWN

- (1) Discharge control equipment? YES NO
How often?
- (2) Waste feed cut-off systems? YES NO
How often?
- (3) Data from tank monitoring equipment? YES NO
How often?
- (4) The level of waste in the tank? YES NO
How often?
- (5) The structural integrity of tank? YES NO
How often?
How are inspections conducted?
What is observed (looked for)?

- (6) The immediate area around the tank
for signs of leaks and the integrity
of secondary containment (if any)? YES NO

e. (1) Have any tanks once used for storage of
hazardous waste been closed or their
function changed? When? NO

(2) Were all hazardous wastes and/or residues
removed? YES NO

(3) What was the disposition of the wastes
or residues (i.e., where did it go)? YES NO

(4) When shipped?

f. Are ignitable or reactive wastes placed in
tanks? RECYCLABLE MATERIALS YES NO

If yes, what measures are used to prevent ignition
or reaction?

g. Have wastes been placed in a tank which
previously contained potentially incom-
patible waste or residue? YES NO

h. (1) If reactive or ignitable wastes are
stored in covered tanks, are they in
compliance with the National Fire
Protection Association's buffer zone
requirements? YES NO

(2) Are "No Smoking" signs posted? YES NO

- (3) Have other measures been adopted to reduce hazards associated with storage of ignitable or reactive waste in tanks?

☒ YES ☐ NO

Explain

9. Preparedness and Prevention (265 Subpart C)

- a. Is facility maintained and operated to minimize the hazards of fire, explosion, and sudden or non-sudden releases to the environment?

☒ YES ☐ NO

Explain:

- b. Is internal emergency communication equipment or alarm systems installed?

☒ YES ☐ NO

What type?

- c. Is a device (e.g., telephone) immediately available for summoning emergency assistance?

☒ YES ☐ NO

- d. Are fire extinguishers or other emergency equipment immediately available on-site?

☒ YES ☐ NO

- e. Is emergency communications and response equipment tested?

☒ YES ☐ NO

How often? UNKNOWN

- f. Is aisle space adequate for emergency response? NOT IN BONEYARD AREA

YES ☒ NO

What is aisle spacing?

- g. (1) Have any arrangements been made with local emergency response organizations? ☒ YES ☐ NO

(2) Which organizations? N.F.D.

- (3) If local organizations have declined to enter into response agreements, is this documented in the facility's operating record?

YES ☒ NO

Explain:

10. Contingency Plan/Emergency Procedures

- a. Has contingency plan been developed?
(It may be a modified SPCC plan) ☒ YES NO
COVERS OIL SPILLS ONLY
- b. Have incidents occurred where the plan
has been implemented? ☒ YES NO
OIL SPILLS
- c. Have incidents occurred where the plan
should have been implemented but was not ☐ YES ☐ NO

Explain

- d. A copy of the plan should either be
obtained for post-inspection office
review or it should be examined during
inspection for the following:
- (1) Does the plan describe actions to
be taken by personnel in response to
fire, explosion, or releases to the
environment? *OIL SPILLS ONLY*
☒ YES ☐ NO
- (2) Does the plan describe arrangements
made with external emergency response
organizations? ☒ YES ☐ NO
- (3) Does the plan list those qualified to
act as emergency coordinator including
their name, address, and phone?
NOT FOR RECORD PURPOSES YES ☒ NO
- (a) Is the list current? YES ☐ NO
- (4) Is all emergency equipment available at
the facility listed in the plan? *UNKNOWN*
YES ☐ NO
- (a) Is the location and a description of
the equipment included? YES ☒ NO
- (b) Are capabilities described for each
piece or equipment unit? YES ☒ NO
- (5) Does the plan include evacuation proce-
dures including a description of signals to
initiate evacuation (and routes and
alternative routes)? YES ☒ NO
- (6) Is a copy of the plan maintained at the
active facility (versus main office)? ☒ YES ☐ NO
- (a) Has a copy been supplied to appropri-
ate off-site emergency response
organizations? ☒ YES ☐ NO
To which? DEC, NREDO

- (7) Is at least one designated person always available to respond to emergencies (i.e. of those on the coordinator list)? ☒ YES ☐ NO
How are they available

What are the limits of this person's authority to respond to emergencies?

- (8) Has an emergency occurred? YES ☐ NO ☐

Was the plan implemented? YES ☐ NO ☐

(Describe the incident)

11. Personnel Training

- a. Has a training program been developed? YES ☒ NO ☐

What type? (Classroom? On-the-job Training?)

PROVIDED FOR
PRODUCT USE
+ SAFETY ONLY.

- b. Does the program include contingency plan and response training? ☒ YES ☐ NO

OIL SPILL

- c. Does the program include measures to familiarize personnel with emergency response equipment, procedures, and systems including:

- (1) Procedures for using and maintaining equipment? ☒ YES ☐ NO

- (2) Key parameters for automatic waste feed cut-off? ☒ YES ☐ NO

- (3) Communications or alarm equipment? ☒ YES ☐ NO

- (4) Response to fire and explosion? ☒ YES ☐ NO

- (5) Response to ground water contamination incidents? ☒ YES ☐ NO

- (6) Facility shut down? ☒ YES ☐ NO

- d. Are records available at the facility for the following:

- (1) Job title for each position related to hazardous waste management and maintaining equipment? YES ☒ NO ☐

- (2) Written job description for each job title? YES ☒ NO ☐

(a) Does the job description include the skill, education or qualifications required for the position? YES ☒ NO

(b) The duties assigned to that position? YES ☒ NO

(3) A written description of the type and amount of training to be given to those in each job position? YES ☒ NO

(4) A record of training completed or experience obtained for each job position by employee? YES ☒ NO

(5) Was the required training obtained within 6 months of employment or by May 19, 1981, by each individual involved in hazardous waste management activities? YES ☒ NO

E. Is Generator familiar with Generator Reporting Procedures?

- | | |
|---|---|
| 1. Annual Reports | YES <input checked="" type="radio"/> NO |
| 2. Exception Reports | YES <input checked="" type="radio"/> NO |
| 3. Spills and Discharges into the Environment | YES <input checked="" type="radio"/> NO |
| 4. Comments | |

F. Is generator aware of and complying with regulations concerning the preparation of hazardous waste for transport? ☒ YES NO

- | | |
|---|---|
| 1. Packaging 40 CFR 173, 178, 179, and with requirements of STATE | <input checked="" type="radio"/> YES NO |
| 2. Labeling 49 CFR 172 | <input checked="" type="radio"/> YES NO |
| 3. Marking 40 CFR 172 | <input checked="" type="radio"/> YES NO |
| 4. Placarding 49 CFR 172 Subpart F | <input checked="" type="radio"/> YES NO |
| 5. Containers with of hazardous waste must be marked with the following or essentially equivalent, words and in information, displayed in accordance with 40 CFR 172.304. | |

HAZARDOUS WASTE - State and Federal Law prohibits improper disposal. If found, contact the nearest police or public safety authority, and the U.S. Environmental Protection Agency.

Generator's Name and Address
Manifest Document No. _____

6. Comments"

G. Are any wastes generated at this facility being transported or stored prior to being recycled, reclaimed, or recovered?

(YES) NO

1. If yes, what are they SEE REPORT NARRATIVE.

- a. Sludge
- b. Characteristic HW
- c. Listed HW
- d. Comments

()
(4)
(4)

IV. Transporter Regulations (40 CFR 263) (Date Revised March 8, 1984)

N/A

A. Transporter facility description.

- | | |
|------------------------------------|--------|
| 1. Operates as a Transfer Facility | YES NO |
| 2. Operates as a Storage Facility | YES NO |
| 3. Operates as a Generator | YES NO |
| 4. Imports Wastes | YES NO |
| 5. Combines Manifested Shipments | YES NO |

B. Does transporter have an EPA ID? YES NO

C. Does the transporter comply with generator regulations under Part 262 if he imports hazardous waste or combines wastes of different DOT shipping descriptions into a single container? YES NO

D. Does the transporter comply with storage regulations under Parts 270, 264, and 265 if he stores manifested shipments at a transfer facility for more than 10 days? YES NO

E. Is transporter aware of and complying with manifest requirements under RCRA 263.20?

1. Before transporting HW is manifest dated and signed by generator? YES NO

2. Does the transporter sign, date, and return a copy of the manifest to the generator before transporting waste off the generator's property? YES NO

3. Does the transporter delivering hazardous waste to another transporter or the designated facility:

a. Obtain a signed and dated (S/D) copy of the manifest? YES NO

b. Retain one copy of the manifest containing signatures of the generator, himself, next designated transporter or the designated TSD facility for 3 years from original manifest date? YES NO

c. Give remaining copies of the manifest to accepting transporter or designated facility? YES NO

N/A

4. Does transporter deliver the entire quantity of HW accepted to:
- a. The designated facility listed on the manifest? or YES NO
 - b. The alternate designated facility in the event the shipment cannot be delivered to the designated facility? or YES NO
 - c. The next designated transporter? YES NO
5. If delivery is not possible, does the transporter contact the generator and revise the manifest according to instructions? YES NO
- F. In the event of a spill or discharge during transport, does the transporter comply with the requirements set forth in 40 CFR 263.30? YES NO
- 1. Give notice to generator YES NO
 - 2. Give notice to the National Response Center (800-424-8802) if required by 40 CFR 171.15?
 - 3. Report in writing, as required by 40 CFR 171.16, to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. YES NO
 - 4. Comments YES NO

V. TREATMENT, STORAGE and DISPOSAL (TSD) Interim Status Regulations
Facilities, 40 CFR 265. (Date Revised March 8, 1984)

A. Type of Activity

1. Storage

- | | |
|-------------------------|-----|
| a. Containers | (✓) |
| b. Tanks | |
| (1) Above ground | () |
| (2) Below ground | () |
| c. Surface Impoundments | () |
| d. Waste Piles | () |
| e. Other | () |

2. Treatment

- | | |
|-------------------------|-----|
| a. Settling | () |
| b. Evaporation | () |
| c. Filtration | () |
| d. Energy Recovery | () |
| e. Incineration | () |
| f. Thermal Treatment | () |
| g. Recycling/Recovery | (✓) |
| h. Chem/Phys/Biological | () |
| i. Other | () |

3. Disposal

- | | |
|------------------------|-----|
| a. Landfill | () |
| b. Land Treatment | () |
| c. Surface Impoundment | () |
| d. Incineration | () |
| e. Other | () |

4. Comments: ELEMENTARY NEUTRALIZATION
USED.

5. Are hazardous wastes accepted from "outside" (off-site) sources(wastes not generated on site)? YES NO

- | | |
|--|--------|
| a. If YES, has a chemical and physical analysis of a representative sample been obtained in accordance with 40 CFR 265.13? | YES NO |
| b. Does the facility confirm that each hazardous waste received at the facility matches the identity of the waste on the manifest? | YES NO |
| c. How does the facility determine this? | |

B. Subpart B - General Facility Standards (40 CFR 265.10 - 265.17)

1. Does the facility obtain a detailed analysis of his waste prior to storing, treating, or disposing of it?

YES ☒ NO

Describe:

2. Does the facility follow a Written Waste Analysis Plan
Does the Plan include?

- | | |
|---|---|
| a. Parameters to be tested? | YES <input checked="" type="radio"/> NO |
| b. Methods of analysis? | YES <input checked="" type="radio"/> NO |
| c. Methods to get representative samples? | YES <input checked="" type="radio"/> NO |
| d. Testing frequency? | YES <input checked="" type="radio"/> NO |

Comments:

3. Did inspector collect a copy of the Plan for a thorough review of it at EPA's offices?

YES ☒ NO

NO PLAN

4. Security

- a. Have site owner/operators taken appropriate measures to ensure against unauthorized entry? ☒ YES NO

- (1) Are signs posted at each entrance to active portion, and at other locations, in sufficient numbers to be seen by any approach? YES ☒ NO

- (2) Are they legible from a distance of 25 feet or more? YES ☒ NO

- (3) Does the facility have a 24-hour surveillance system or artificial or natural barrier/or combination of both, to control access to the active portion? ☒ YES NO

Comments:

5. Does the facility follow a Written Inspection Schedule (40 CFR 265.15)?

YES ☒ NO

- | | |
|------------------------------------|--------|
| a. Does it include inspecting all: | |
| Monitoring equipment? | YES NO |
| Safety and emergency equipment? | YES NO |
| Security devices? | YES NO |
| Detecting equipment? | YES NO |

- Dangerous waste storage areas? YES NO
- b. Is this inspection schedule maintained at the facility? YES NO
- c. Is an inspection log maintained? YES NO
- (1) Is the log, or its summary, kept at the facility for at least three years from the date of inspection? YES NO
- (2) Does the log include:
- (a) date of time of inspection? YES NO
- (b) inspectors name? YES NO
- (c) observations? YES NO
- (d) date and nature of repairs? YES NO

Comments:

6. Personnel Training (40 CFR 265.16)

- a. Has a training program been developed? YES NO
What Type? (Classroom/on-the-job) TRAINING ON PRODUCT USE PROVIDED
- b. Does the program include contingency plan and response training? YES NO
OIL SPILL TRAINING
- c. Does the program include measures to familiarize personnel with emergency response equipment, procedures, and systems including:
NOT SPECIFICALLY FOR H.W. YES NO
- (1) Procedures for using and maintaining equipment? YES NO
- (2) Key parameters for automatic waste feed cut-off systems. YES NO
- (3) Communications or alarm equipment YES NO
- (4) Response to fire and explosions YES NO
- (5) Response to ground water contamination incidents? YES NO
- (6) Facility shut down? YES NO

d. Are records available at the facility for the following:

- (1) Job title for each position related to hazardous waste management and maintaining equipment? YES ☒ NO
- (2) Written job description for each job title? YES ☒
 - (a) Does the job description include the skill, education or qualifications required for the position? YES ☒
 - (b) The duties assigned to that position? YES ☒
- (3) A written description of the type and amount of training to be given to those in each job position? YES ☒
- (4) A record of training completed or experience obtained for each job position by employee? YES ☒
- (5) Was the required training obtained within 6 months of employment or by May 19, 1981, by each individual involved in hazardous waste management activities? YES ☒

C. Subpart C - Procedures and Preventions (40 CFR 265.30)

1. Is facility maintained and operated to minimize the hazards of fire, explosion, and sudden or non-sudden releases to the environment?

☒ YES ☐ NO

Explain:

2. Is internal emergency communication equipment or alarm systems installed?

☒ YES ☐ NO

What type?

3. Is a device (e.g., telephone) immediately available for summoning emergency assistance?

☒ YES ☐ NO

4. Are fire extinguishers or other emergency equipment immediately available on-site?

☒ YES ☐ NO

5. Is emergency communications and response equipment tested?

☒ YES ☐ NO

How often?

6. Is aisle space adequate for emergency response? *NOT FOR 'BONEYARD'*

YES ☒ NO

CONTAINER STORAGE AREA
What is the aisle spacing?

7. Have any arrangements been made with local emergency response organizations?

☒ YES ☐ NO

8. Which organizations? *N.P. FIRE DEPT.*

9. If local organizations have declined to enter into response agreements, is this documented in the facility's operating record?

NO AGREEMENTS FOR HW. YES NO

Explain:

D. Subpart D - Contingency Plan and Emergency Procedures 40 CFR
265.50

1. Has contingency plan been developed?
(It may be a modified SPCC plan)
2. Have incidents occurred where the plan
has been implemented?
3. Have incidents occurred where the plan
should have been implemented but was not

☒ YES ☐ NO
BUT OIL SPILL ONLY.

☒ YES ☐ NO
OIL SPILL ONLY
YES ☒ NO

Explain

4. A copy of the plan should either be
obtained for post-inspection office
review or it should be examined during
inspection for the following:
 - a. Does the plan describe actions to
be taken by personnel in response to
fire, explosion, or releases to the
environment?
 - b. Does the plan describe arrangements
made with external emergency response
organizations?
 - c. Does the plan list those qualified to
act as emergency coordinator including
their name, address, and phone?
 - (1) Is the list current?
 - d. Is all emergency equipment available at
the facility listed in the plan?
 - (1) Is the location and a description of
the equipment included?
 - (2) Are capabilities described for each
piece or equipment unit?
 - e. Does the plan include evacuation proce-
dures including a description of signals to
initiate evacuation (and routes and
alternative routes)?

YES ☒ NO ☐ NOT KN

YES ☒ NO ☐

YES ☒ NO ☐

YES ☒ NO ☐

UNKNOWN
YES ☐ NO ☐

YES ☒ NO ☐

YES ☒ NO ☐

YES ☒ NO ☐

f. Is a copy of the plan maintained at the active facility (versus main office)? ☒ YES NO

(1) Has a copy been supplied to appropriate off-site emergency response organizations?

☒ YES NO

To which? DEC, N.P.F.D

5. Is at least one designated person always available to respond to emergencies (i.e., of those on the coordinator list)?

☒ YES NO

How are they available

6. What are the limits of this person's authority to respond to emergencies?

a. Has an emergency occurred? YES NO

b. Was the plan implemented? YES NO

c. (Describe the incident)

E. Subpart E - Manifest System, Recordkeeping, and Reporting 40
CFR 265.70

1. Manifest System

a. Upon receipt of a manifested hazardous waste shipment, does the TSD facility:

N/A NO
WASTES
RECEIVED

(1) Sign and date each copy of manifest receipt of certifying waste? YES NO

(2) Note any discrepancies on each copy? YES NO

(3) Give delivering transporter one signed and dated copy of the manifest? YES NO

(4) Send a S/D copy of the manifest to the generator within 30 days after delivery and? YES NO

(5) Retain a copy of each manifest at the facility for 3 years from delivery? YES NO

b. If the TSD facility initiates a hazardous waste shipment, does it comply with generator requirements in Part 262? YES NO

c. Does the TSD facility examine manifests and wastes received to detect any significant discrepancies in quantity or type of waste, such as: YES NO

(1) Bulk waste-quantity variation of 10 percent or greater

(2) Batch waste - any variation in piece count

(3) Waste type - obvious differences discernible by inspection or waste analysis

d. If significant discrepancies are found, does the TSD facility:

(1) Reconcile discrepancies with generator or transporter within 15 days? or YES NO

- (2) Immediately submit to EPA-RA a Discrepancy Report describing the discrepancy and attempts to resolve it and a copy of the manifest involved?

YES NO

N/D

- e. TSD facilities must keep a written operating record documenting the following details:

- (1) Waste description and quantity received
- (2) Methods and dates of its treatment, storage, and disposal
- (3) The location and quantity of each HW at the facility

N/D

2. Operating Record

- a. Does the owner/operator of the facility maintain an operating record at the facility (40 CFR 265.73)? YES ☒ NO
- b. Does the record contain the following information.
- (1) A description of, and the quantity of each HW received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility? YES ☒ NO
 - (2) The location of each Hazardous Waste within the facility, and its quantity? YES ☒ NO
 - (3) A map showing disposal sites? YES ☒ NO
 - (4) Summary reports and details of all incidents that require implementing the Contingency Plan? Yes ☒ NO
 - (5) Records and results of inspections as required (need only be kept three years)? YES ☒ NO
 - (6) All closure and post-closure cost estimates required for the facility? YES ☒ NO
 - (7) The results of testing and waste analysis? YES ☒ NO

3. Facility Reporting Procedures

- a. Has the owner/operator prepared and submitted a single copy of the Annual Report to EPA by March 1 of each year? YES ☒ NO
- b. Is owner/operator familiar with procedures for emergencies? ☒ YES NO
- c. If a TSD facility accepts a regulated hazardous waste shipment without the required manifest or shipping paper, does it file an "Unmanifested Waste Report" within 15 days or receipt? YES NO N/A.

F. Subpart F - Ground-Water Monitoring (40 CFR 265.90)

1. Are ground-water (GW) monitoring regulations required at this facility? YES NO

2. If YES, what is the relevant process unit?

- a. Surface impoundment ()
 - b. Waste pile ()
 - b. Land treatment ()
 - c. Landfills ()
 - d. Other ()
- Describe:

3. Has the owner/operator implemented a ground water monitoring plan? YES NO

4. If NO, has the facility implemented one of the following:

- a. GW Waiver [265.90(c)] ()
- b. Alternate GW Monitoring System [265.90(d)] ()
- c. Neutralization Waiver (265.90(e)) ()
- d. Describe:

5. Does the ground water monitoring program consist of the following:

N/A

- a. At least 1 upgradient and 3 downgradient wells? YES NO
- b. GW Sampling and Analysis Plan YES NO
- c. GW sampling quarterly first year YES NO
- d. GW sampling semiannually after that YES NO
- e. Drinking Water Standards parameters YES NO
- f. Sampling frequency _____
- f. GW Quality parameters YES NO
- f. Sampling frequency _____
- g. GW Indicator parameters YES NO
- g. Sampling frequency _____
- h. GW elevation parameters YES NO
- i. Outline GW Quality Assessment Program YES NO
- j. Statistical Analysis of Indicator parameters YES NO

Results:

6. Has the facility implemented GW Quality Assessment program? YES NO

a. Date: _____
b. Results: _____

7. Does the facility maintain the necessary records.

a. Initial background parameter concentrations YES NO
b. Subsequent parameters concentrations YES NO
c. Statistical evaluations YES NO

8. Has the facility reported necessary information YES NO
a. DW Standards for 1st year YES NO
b. GW Indicator parameters annually YES NO
c. Statistical evaluation YES NO

9. Comments:
FACILITY DOES CONDUCT GROUND
WATER MONITORING FOR OIL
SPILLS.

N/A
↓

G. Subpart G - Closure and Post-Closure (40 CFR 265.110)

Closure

1. Has the facility developed a closure plan which outlines all necessary steps to safely close the facility? (40 CFR 265.117)
 - a. Description of how and when the facility will be partially closed (if applicable) and finally closed? YES ☒ NO
 - b. Estimate of the maximum inventory of wastes in storage and in treatment at any time during the life of the facility? YES ☒ NO
 - c. Description of the steps needed to decontaminate the facility equipment during closure? YES ☒ NO
 - d. Comment:

Post-Closure

2. Has the facility developed a post-closure plan which contains the following steps to safely care for the facility after closure/post-close of the facility? (40 CFR 265.117) ☒ NO
 - a. Description of how post closure will be carried out for the next 30 years. () ()
 - b. Notice to the local land authority within 90 days after closure is completed? () ()
 - c. Notice in deed to property? () ()

H. Subpart H - Financial Requirements 40 CFR 265.140

1. Liability

- a. (1) Does facility maintain liability insurance for sudden occurrences in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million? YES NO
- (2) By what method did the owner/operator demonstrate sudden liability coverages to the RA?
- (a) HW facility liability endorsement(s) ()
 - (b) HW facility certificate(s) of liability insurance ()
 - (c) financial test ()
 - (d) corporate guarantee ()
 - (e) multiple mechanisms (specify) ()
- b. (1) If a surface impoundment, landfill, or land treatment exist at the facility, does facility maintain liability insurance for nonsudden occurrence in the amount of at least \$3 million per occurrence with an annual aggregate of at least \$6 million? YES NO
- (2) By what method did the owner/operator demonstrate non-sudden liability coverage to RA?
- (a) HW facility liability endorsement(s)' ()
 - (b) HW facility certificate(s) of liability insurance' ()
 - (c) financial test ()
 - (d) corporate guarantee ()
 - (e) multiple mehcanisms (specify) ()

UNKNOWN

N/A

c. Has owner/operator submitted an originally signed duplicate of liability coverage demonstration to RA? ☒ NO

d. Is wording of liability coverage instruments identical to that specified in 40 CFR 264.151?

YES ☒ NO

Comment:

2. Assurance

a. Closure

(1) Has facility prepared a written estimate of the cost of closing the facility in accordance with the closure plan (40 CFR 265.112)? Yes ☒ NO

(2) Has this cost estimate been adjusted annually for inflation? YES ☒ NO

(3) Has facility established financial assurance for the closure of the facility (40CFR 265.143)? YES ☒ NO

(4) By what method has this been achieved:

- | | |
|--|-----|
| a. Trust fund | () |
| b. Surety bond (with standby trust) | () |
| c. Letter of credit (with standby trust) | () |
| d. Insurance | () |
| e. Financial test | () |
| f. Corporate guarantee | () |
| g. Multiple mechanisms | () |

(5) Has facility submitted an originally signed duplicate of financial assurance to RA? YES ☒ NO

(6) Is wording of the financial assurance statement identical to that specified in 40 CFR 264.151? YES ☒ NO

(7) Comment:

b. Post-Closure (Disposal Facilities)

(1) Has facility prepared a written estimate of the cost of post-closure monitoring and maintenance of the facility (40 CFR 265.144)? YES ☒ NO

(2) Has this cost estimate been adjusted annually for inflation? YES ☒ NO

(3) Has owner/operator established financial assurance for the post-closure care of the facility (40 CFR 265.145)? YES ☒ NO

(4) By what method has this been achieved:

- (a) Trust fund ()
- (b) Surety bond (with standby trust) ()
- (c) Letter of credit (with standby trust) ()
- (d) Insurance ()
- (e) Financial test ()
- (f) Corporate guarantee ()
- (g) Multiple Mechanisms ()

(5) Has owner/operator submitted an originally signed duplicate of financial assurance to Regional Administrator?

YES ☒ NO

(6) Is wording of the financial assurance statement identical to that specified in 40 CFR 264.151?

YES ☒ NO

I. Subpart I Use and Management of Containers (40 CFR 265.170)

1. Does this section apply to this facility? ☒ YES ☐ NO
2. Are the containers made of or lined with materials which will not react with and are compatible with the hazardous waste to be stored in them? ☒ YES ☐ NO
3. Are the containers always closed, except to add or remove waste? ☒ YES ☐ NO
4. Are container storage areas inspected weekly for leaks and container deterioration (40 CFR 265.174)? YES ☒ NO
5. Are precautions taken to prevent accidental ignition or reaction of ignitable or reactive waste? YES ☒ NO
6. Are containers holding ignitable or reactive waste located at least 50 feet from the facility's property line? ☒ YES ☐ NO
7. Is the facility aware of and complying with the following requirements for incompatible wastes:
 - a. Incompatible wastes must not be placed in the same containers, unless in compliance with 265.17(b) ☒ YES ☐ NO
 - b. HW must not be placed in an unwashed container that previously held an incompatible waste ☒ YES ☐ NO
 - c. Are storage containers holding HW that are incompatible with any waste or other material stored nearby separated from or protected from them by means of a dike, berm, wall, or other device? YES ☒ NO

Explain? CONTAINERS IN 'PONEYARD' STOCKED WITHOUT SEPARATION FOR INCOMPATIBLE:

8. Are containers marked or labeled in a manner equivalent to 40 CFR 172 subpart E? YES ☒ NO
9. Comments:

J. Subpart J - Tanks (40CFR 265.190)

N/A

1. Does this section apply to this facility? YES NO
2. Do tanks on the facility hold hazardous waste? YES NO

If so, what are their contents?

3. Is storage in tanks conducted such that:

- a. It does not generate heat, pressure, fire, explosion or violent reaction?
(If no, explain) YES NO
- b. It does not produce uncontrolled toxic mists, fumes, dusts, or gases?
(If no, explain) YES NO
- c. It does not produce uncontrolled flammable fumes or gases? YES NO
- d. It does not damage the tank? YES NO
- e. It does not threaten the environment in other ways (i.e., leaks, spills)? YES NO

Comments:

4. Is 2 feet of freeboard maintained in uncovered tanks? YES NO

If no, is secondary containment used? YES NO

(Explain)

5. Is the tank(s) continuously fed? YES NO

If yes, is there a means to stop inflow? YES NO

Explain

6. Are Hazardous Waste storage tanks operated in a manner which minimizes the possibility of overfilling? YES NO

How:

Waste feed cut-off ()
Bypass system to another tank ()
High level alarm ()
Other _____

N/A.

7. Are inspections of the following conducted:
 - a. Discharge control equipment? YES NO
How often?
 - b. Waste feed cut-off systems? YES NO
How often?
 - c. Data from tank monitoring equipment? YES NO
How often?
 - d. The level of waste in the tank? YES NO
How often?
 - e. The structural integrity of tank? YES NO
How often?
How are inspections conducted?
What is observed (looked for)?
 - f. The immediate area around the tank for signs of leaks and the integrity of secondary containment (if any)? YES NO
8. Have any tanks once used for storage of hazardous waste been closed or their function changed? When?
 - a. Were all hazardous wastes and/or residues removed? YES NO
 - b. What was the disposition of the wastes or residues (i.e., where did it go)? YES NO
 - c. When shipped?
9. Are ignitable or reactive wastes placed in tanks? YES NO
10. If yes, what measures are used to prevent ignition or reaction?
11. Have wastes been placed in a tank which previously contained potentially incompatible waste or residue? YES NO
12. If reactive or ignitable wastes are stored in covered tanks, are they in compliance with the National Fire Protection Association's buffer zone requirements? YES NO
13. Are "No Smoking" signs posted? YES NO

N/A

14. Have others measures been adopted to reduce hazards associated with storage of ignitable or reactive waste in tanks? YES NO

Explain

15. Waste Analysis and Trial Tests

- Before treating and storing of hazardous waste in a tank is a detailed chemical and physical analysis of the waste obtained? YES NO

16. Does the company have and follow a written waste analysis plan? YES NO

- a. Does the plan identify parameters used? YES NO

Explain

- b. Sampling Method? YES NO

Explain

- c. How frequent is analysis repeated? YES NO

- d. Are results of waste analysis and trial tests placed in the facility's operating record.

17. Are waste analyses done when a tank is used to treat or store a HW which is substantially different or treated differently from waste previously treated or stored in the tank? YES NO

K. Subpart K - Surface Impoundments (40 CFR 265.220)

- | | | | |
|----|---|-----|-------------------------------------|
| 1. | Does this section apply to this facility? | YES | <input checked="" type="radio"/> NO |
| 2. | Does the surface impoundment maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action, or a storm? | YES | NO |
| 3. | Are the surface impoundments designed and operated to allow two feet of freeboard? | YES | NO |
| 4. | Do earthen dikes have a protective cover which minimizes erosion (grass, rock, shale)? | YES | NO |
| 5. | Is a waste analysis or trail test conducted whenever a surface impoundment is used to chemically treat a HW which is substantially different or treated differently from waste previously treated in the surface impoundment? | YES | NO |
| 6. | Are results of waste analyses documented in the facility's operating record? | YES | NO |
| 7. | Are the surface impoundments inspected on a routine basis? How often? | YES | NO |
| 8. | Are ignitable or reactive wastes held in a surface impoundment (40 CFR 265.229)? | YES | NO |
| 9. | Comments: | | |

The following 40 CFR Subparts do not have a specific checklist prepared because few of these types of facilities exists in Region X. Inspection made at facilities which operate any of the following would require the inspector to prepare an inspection checklist prior to the site visit.

- L. Subpart L - Waste Piles (40 CFR 265.250)
- M. Subpart M - Land Treatment (40 CFR 265.270)
- N. Subpart N - Landfills (40 CFR 265.300)
- O. Subpart O - Incinerators (40 CFR 265.340)
- P. Subpart P - Thermal Treatment (40 CFR 265.370)
- Q. Subpart Q - Chemical, Physical, and Biological Treatment (40 CFR 265.400)
- R. Subpart R - Underground Injection (40 CFR 265.430)

VI. Treatment, Storage, and Disposal (TSD) Permit Regulations (40 CFR 264) (Date Revised November 21, 1983)

This Part of the checklist does not have a specific checklist prepared because the checklist would be different for each facility. A compliance inspection made at a facility which has been issued a Part B Permit needs to have checklist and/or narrative which reviews all of the requirements of the facility's Permit. This checklist and/or narrative needs to be developed by the individual inspector.

Appendix 5
CERCLA Investigation Reports

1-31-87

Appendix 6
Sample Analysis Records

GLEAN INCORPORATED
6300 PETERSBURG STREET
ANCHORAGE, ALASKA 99507
(907) 561-4763

Jan. 31, 1987

Robert J. Hook
Operations Superintendent
MAPCO Petroleum
1100 H & H Lane
North Pole, Alaska 99705

Re; Sludges;

Dear Bob;

First of all let me thank you for taking time out of your busy schedule to meet with Bob and I.

I have enclosed three copies of the sample results we had run on your material, for your records,

As I indicated we have done a lot of research on the proper disposal of this material. We have found an EPA permitted facility to process these sludges. The firm that has given us the best price and that we have confidence in using is Crosby and Overton of Kent, Wa. The total price to MAPCO for transportation and disposal of this material will be \$590.00 per drum. This includes all labor to load, label, manifest, transport and proper disposal. All work done by Glean, Incorporated will be done according to all local, state and federal regulations. MAPCO if they don't already have one, need to get an EPA generators ID number before the disposal facility will accept the material. Also you will have to provide a forlift to help in loading the truck.

Glean, Incorporated will be able to ship with in two weeks after we recieve a "notice to proceed". By agreement with the Canadian EPS we must give them seven working days notice that we will be transporting through Canada.

We thank you for the oppertunity to submit our quote on this project, and look forward to hearing from you soon.

Sincerely;

Tom McKee

Leon "Tom" McKee
Vice President



NORTHERN TESTING LABORATORIES, INC.

600 UNIVERSITY PLAZA WEST, SUITE A
6957 OLD SEWARD HWY., SUITE 101

FAIRBANKS, ALASKA 99709
ANCHORAGE, ALASKA 99518

907-479-3115
907-349-8623

Glean Inc.
6300 Petersburg Street
Anchorage, Alaska 99507

Date Arrived: 11/12/86
Time Arrived: 1600
Date Sampled: -
Time Sampled: -
Date Completed: 12/10/86

Location: Mapco
Source: See Below

Parameter	Unit	S4-A	S-2A	S-3A	S-1-A
		GP-1	GP-1	GP-1	GP-2-MP
		111286-2	111286-3	111286-4	111286-5
Purgeable Halocarbons		See Attached			
Purgeable Aromatics		See Attached			
Petroleum Hydrocarbons	mg/l	170,000	270,000	310,000	820,000
Corrosivity	pH units	6.8	6.7	6.9	5.5
Reactivity:					
To water		none	none	none	none
Sulfide		negative	negative	negative	negative
Cyanide		negative	negative	negative	negative
Flash Point	deg F	>220	>212	>215	136
BP Toxicity, metals					
Arsenic	mg/l	<0.001	<0.001	<0.001	<0.001
Barium	mg/l	<0.1	<0.1	<0.1	<0.1
Cadmium	mg/l	<0.005	<0.005	<0.005	0.069
Chromium	mg/l	<0.05	<0.05	<0.05	<0.05
Lead	mg/l	<0.001	<0.001	<0.001	0.017
Mercury	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Selenium	mg/l	<0.002	<0.002	<0.002	1.62
Silver	mg/l	<0.01	<0.01	<0.01	<0.01

Reported By:

Carol J. Garrison

Date: 12/10/86

Carol J. Garrison, Vice-President



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Source: See Below

Date Arrived: 11/12/86
Time Arrived: 1600
Date Sampled: -
Time Sampled: -
Date Completed: 12/10/86

Parameter	Unit	S4-A GP-1 111286-2	S-2A GP-1 111286-3	S-3A GP-1 111286-4	S-1-A GP-2-MP 111286-5
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Purgeable Aromatics:

Benzene	mg/kg	107	320	18	17,400
Chlorobenzene	mg/kg	<0.2	<1.1	<0.2	<10
1,2-Dichlorobenzene	mg/kg	<0.4	<2.3	<0.4	<21
1,3-Dichlorobenzene	mg/kg	<0.3	<1.7	<0.4	<21
1,4-Dichlorobenzene	mg/kg	<0.4	<2.3	<0.3	<14
Ethylbenzene	mg/kg	29	202	31	3500
Toluene	mg/kg	120	207	76	3700

Reported By:

Carol J. Garrison

Date: 12/10/86

Carol J. Garrison, Vice-President



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Glean Inc.
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Location: Mapco
Source: See Below

Date Arrived: 11/12/86
Time Arrived: 1600
Date Sampled: -
Time Sampled: -
Date Completed: 12/10/86

Parameter	S4-A GP-1 111286-2 mg/kg	S-2A GP-1 111286-3 mg/kg	S-3A GP-1 111286-4 mg/kg	S-1-A GP-2-MP 111286-5 mg/l
-----------	-----------------------------------	-----------------------------------	-----------------------------------	--------------------------------------

Purgeable Halocarbons:

Bromodichloromethane	<0.005	<0.005	<0.005	<0.005
Bromoform	<0.01	<0.01	<0.01	<0.01
Bromomethane	<0.06	<0.06	<0.06	<0.06
Carbon tetrachloride	<0.006	4.8	0.027	<0.006
Chlorobenzene	<0.01	<0.01	<0.01	<0.01
Chloroethane	<0.26	<0.26	<0.26	<0.26
2-Chloroethylvinyl ether	<0.006	<0.006	<0.006	<0.006
Chloroform	<0.025	<0.025	<0.025	<0.025
Chloromethane	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	<0.045	<0.045	<0.045	<0.045
1,2-Dichlorobenzene	<0.08	<0.08	<0.08	<0.08
1,3-Dichlorobenzene	<0.16	<0.16	<0.16	<0.16
1,4-Dichlorobenzene	<0.12	<0.12	<0.12	<0.12
1,1-Dichloroethane	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	<0.02	<0.02	<0.02	<0.02
1,1-Dichloroethene	<0.07	<0.07	<0.07	<0.07
trans-1,2-Dichloroethene	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	<0.02	<0.02	<0.02	<0.02
cis-1,3-Dichloropropene	<0.10	<0.10	<0.10	<0.10
trans-1,3-Dichloropropene	<0.17	<0.17	<0.17	<0.17
Methylene chloride	<0.13	<0.13	<0.13	<0.13
1,1,2,2-Tetrachloroethane	<0.015	<0.015	<0.015	<0.015
Tetrachloroethene	<0.015	9.1	<0.015	<0.015
1,1,1-Trichloroethane	<0.015	<0.015	<0.015	<0.015
1,1,2-Trichloroethane	<0.01	<0.01	<0.01	<0.01
Trichloroethene	<0.06	<0.06	<0.06	<0.06
Trichlorofluoromethane	<0.10	<0.10	<0.10	<0.10
Vinyl chloride	<0.09	<0.09	<0.09	<0.09

Reported By:

Carol J. Garrison

Date: 12/10/86

Carol J. Garrison, Vice-President

MAPCO PETROLEUM, INC.
NORTH POLE REFINERY LAGOON AND STORAGE TANK WASTEWATER ANALYSES
Sample Date: February 10, 1987

PARAMETERS	UNITS	ID# Time	LAGOON			TANK 508		TANK 509		QUALITY CONTROL DATA						
			Ice 021187-5 1345	Liquid 021187-1 1310	Sludge 021187-2 1345	Ice 021187-7 1600	Liquid 021187-4 1645	Ice 021187-6 1430	Liquid 021187-3 1550	METHOD †	QC Standard	Result	True Value (Range)			
J MEASUREMENTS.																
Color			Grey	Top/Bottom Clear/Dark	Black	Clear	Black	Clear	Green	Observation						
Conductivity (field)	µmhos/cm			6000/6000	6000		2100		1500	YSI Conductivity/Salinity/Temperature Meter						
Dissolved Oxygen	mg/L			0.2/0.2	<0.1		<0.3		<0.3	YSI Dissolved Oxygen Meter						
Ice Thickness	Inches		18			31.5		34.5		Tape Measure						
Odor				"Sweet"	"Septic"		"Fuel"		"Fuel"	Observation						
pH	pH Units			10.1/8.4	8.4		7.3		7.7	Hanna Instruments "pH Pen"						
Salinity	‰			6.0/6.0	6.0		2.1		1.5	YSI Conductivity/Salinity/Temperature Meter						
Sample Depth	Feet			1.5/6.0	7.0		22		22	Tape Measure						
Temperature	°C			0.0/3.5	3.5		0.0		0.0	YSI Conductivity/Salinity/Temperature Meter						
LABORATORY ANALYSES:																
BOODS, Soluble	mg/L		33	290	220	40	220	6.0	18	SM 209C/507 (F) ††						
BOODS, Total	mg/L		38	290	2160	53	300	7.0	18	SM 507						
COO, Soluble	mg/L		250	1200	1220	175	1250	75	475	SM 209C/508 (F)						
COO, Total	mg/L		325	5350	16800	185	5750	100	475	SM 508						
Total Solids	mg/L		1530	7040	16100	1000	7220	362	3790	SM 209A						
Total Volatile Solids	mg/L		128	766	4280	154	684	137	375	SM 209D						
Total Suspended Solids	mg/L		13	14	11700	8.7	26	8.0	18	SM 209C (F)						
Volatile Suspended Solids	mg/L		7.3	8.3	4120	6.7	20	5.3	15	SM 209D (F)						
Total Dissolved Solids	mg/L		1517	7026	4400	991.3	7194	354	3772	By Calculation						
Volatile Dissolved Solids	mg/L		121	758	160	147	664	132	360	By Calculation						
Alkalinity (as CaCO3)	mg/L		140	610	990	120	680	44	440	EPA 310.1	EPA 384-2	17.5	(14.5 - 20.5)			
Ammonia	mg/L		1.9	11	25	1.1	8.3	<0.1	2.9	SM 417A & D						
Chloride	mg/L		745	3190	3370	488	3240	177	1750	EPA 325.3 (F)	EPA 384-2	11.1	(9.8 - 13.2)			
Conductivity (lab)	µmhos/cm		3200	6000	6200	1950	6500	740	3500	EPA 120.1						
Cyanide	mg/L			<0.01	<0.01		<0.01	<0.01	<0.01	SM 412B & D	EPA WP179	0.238	(0.155 - 0.271)			
Nitrate	mg/L			<0.1	<0.1		<0.1	<0.1	<0.1	EPA 352.1 (F)	EPA 384-2	0.15	(0.10 - 0.18)			
Nitrite	mg/L			<0.01	0.01		1.2	<0.01	<0.01	EPA 354.1 (F)						
Oil & Grease, Total	mg/L		64	11	65 *	8.7	7.8	2.5	2.7	SM 503B	EPA WP379	21.1	(8.8 - 26.5)			
Oil & Grease, Floatable	mg/L		18							SM 602B †††						
pH (lab)	Units @ °C		7.9 @ 14	8.5 @ 14	8.3 @ 17	7.6 @ 18	7.3 @ 16	7.6 @ 18	7.5 @ 13	SM 423						
Phenols	mg/L			2.9	3.1		3.2		0.13	EPA 420.1	EPA 179-6	0.039	0.025			
Phosphate, Total	mg/L		0.30	0.75	1.1	0.14	0.72	<0.17	0.34	SM 424F	(F) EPA 284-8	1.06	(1.05 - 1.29)			
Silica	mg/L		16	34	32	9.0	46	6.4	36	SM 425C	(F)					
Sulfate	mg/L		19.1	89	70	<1.0	5.8	1.0	18.5	EPA 375.4	(F) EPA 384-2	6.7	(4.49 - 9.23)			
Sulfide	mg/L			0.17	120		0.15		1.3	Electrode						
Metals:																
Arsenic	mg/L		<0.001	0.004	0.076	<0.001	0.007	<0.001	0.008	EPA 206.2	EPA 284-1	0.032	(0.020 - 0.034)			
Calcium	mg/L		40.0	170	906	17.5	118	2.92	52.6	EPA 215.1	EPA 384-2	4.85	(4.52 - 6.12)			
Cadmium	mg/L		0.005	0.008	0.064	0.021	0.011	0.006	0.095	EPA 213.1	EPA 284-2	0.039	(0.031 - 0.047)			
Chromium, Hexavalent	mg/L		<0.01	<0.01	0.23	<0.01	<0.01	<0.01	<0.01	EPA 218.4	EPA 284-2	0.237	(0.209 - 0.307)			
Chromium, Total	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	EPA 218.1	EPA 284-2	0.241	(0.209 - 0.307)			
Copper	mg/L		0.04	<0.02	1.5	<0.02	<0.02	<0.02	<0.02	EPA 220.1	EPA 284-2	0.360	(0.302 - 0.361)			
Iron	mg/L		2.62	1.44	679	0.95	2.58	0.24	0.64	EPA 236.1	EPA 284-2	0.859	(0.695 - 0.882)			
Lead	mg/L		0.016	0.002	1.19	0.002	0.003	0.004	0.001	EPA 239.2	EPA 284-1	0.052	(0.034 - 0.054)			
Mercury	mg/L		0.0012	<0.0002	0.0081	0.0012	<0.0002	0.0006	<0.0002	EPA 245.1	EPA 378-14	0.0039	(0.0032 - 0.0052)			
Magnesium	mg/L		10.3	37.1	107	6.86	42.7	3.96	32.6	EPA 242.1	EPA 384-2	0.192	(0.137 - 0.215)			
Manganese	mg/L		0.284	0.838	12.4	0.751	2.05	0.052	0.411	EPA 243.1	EPA 284-2	0.311	(0.304 - 0.387)			
Potassium	mg/L		7.58	25.0	42.4	5.78	31.4	2.10	13.6	EPA 258.1	EPA 384-2	2.32	(1.70 - 2.55)			
Sodium	mg/L		1110	1810	1850	955	2350	780	1540	EPA 273.1	EPA 384-2	0.828	(0.727 - 0.927)			
Selenium	mg/L		<0.002	0.003	0.008	<0.002	0.006	0.004	0.004	EPA 270.2	EPA 284-1	0.011	(0.007 - 0.014)			
Silver	mg/L		0.01	0.01	0.04	0.05	0.01	<0.01	<0.01	EPA 272.1	EPA 378-14	0.029	(0.021 - 0.031)			
Zinc	mg/L		1.14	0.080	10.4	0.150	0.142	0.182	0.055	EPA 289.1	EPA 284-2	0.423	(0.381 - 0.449)			
Purgeable Aromatics:																
Benzene	µg/L			2600	1.4		220		5.8	EPA 602/8020	Travel Blank	<0.2	5.3		5.0	
Chlorobenzene	µg/L			<10	<0.3		<20		<1.0			<0.2			5.0	
1,2-Dichlorobenzene	µg/L			<20	<0.5		<40		<2.0			<0.4	5.0		5.0	
1,3-Dichlorobenzene	µg/L			<20	<0.5		<40		<2.0			<0.4	5.3		5.0	
1,4-Dichlorobenzene	µg/L			<15	<0.4		<30		<1.5			<0.3	4.2		5.0	
Ethylbenzene	µg/L			160	<0.3		100		<1.0			<0.2	4.4		5.0	
Toluene	µg/L			1700	0.73		770		2.6			<0.2	4.6		5.0	
Xylenes	µg/L			680	<0.3		440		1.0			<0.2			5.0	

* Formed a very stable emulsion, value may be low.

† SM = Standard Methods, 16th Edition; EPA = EPA Methods for Chemical Analysis of Water & Wastes.

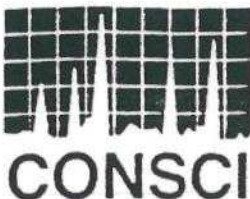
†† (F) = Filtered through a glass fiber (suspended solids) filter prior to analysis.

††† Modified Method.

Field measurements and samples were collected by Michael R. Pollen of Northern Testing Laboratories, Inc. and Michael Lecorchick of Stannon & Wilson, Inc. Purgeable aromatics, cyanide, and grease & oil were run at Northern Testing Laboratories, Inc., Anchorage water quality laboratory. All other laboratory analyses were run at Northern Testing Laboratories, Inc., Fairbanks water quality laboratory.

REPORTED BY: *Michael R. Pollen*

DATE 2/25/87



RECEIVED

JUN 13 1986

DEPT. OF ENVIRONMENTAL
CONSERVATION
NRO

Mapco Petroleum Inc.
1100 H & H Lane
North Pole, Alaska 99705

June-10, 1986

Attn: Bob Hook

Certificate # : 60519005
Sample ID : Stack Sludge
Date Received : May 19, 1986

Composition

Loss on Ignition	wt%	3.63	*
Chloride	"	49.8	
Sulfur	"	1.17	
Iron	"	0.50	
Silica	"	0.58	
Sodium	"	31.8	
Calcium	"	0.54	
Magnesium	"	0.39	

EP Toxicity (USEPA SW-846, 1982)

Metals

Arsenic	mg/l	< .5
Cadmium	"	< .1
Chromium	"	< .5
Lead	"	< .5
Barium	"	< 10
Mercury	"	< .02
Selenium	"	< .5
Silver	"	< .5

Pesticides/Herbicides

Endrin	mg/l	< .02
Lindane	"	< .4
Methoxychlor	"	< 10
Toxaphene	"	< .5
2,4-D	"	< 10
2,4,5-TP(Silvex)	"	< 1

* Loss on ignition would include water, hydrocarbons, and carbon.

EP Toxicity (contd)

Corrosivity	mm/yr	< 6.35
Flash point	deg C	> 60
Reactivity		
Cyanide	ppm/wt	< 10
Sulfide	"	400